

COAL

MINING

UNIVERSITY MICROFILMS  
313 N 1ST ST  
ANN ARBOR, MICH

Progressive Mine Operators  
depend on **ALLIS-CHALMERS** Tractors  
from *Highway!*

At mine after mine, you'll  
find the big orange tractors...  
powerful A-Cs that spell  
bigger, faster production...  
and larger profits!

See your Highway  
representative today. He'll  
give you full facts about  
the complete Allis-Chalmers' line—  
first choice at leading mines.



Allis-Chalmers HD-21 working at Kristianson & Johnson Coal Co., Lanse.



Allis-Chalmers HD-16 at Clarence J. Semple mine, La Jose.

*Highway*



**HIGHWAY EQUIPMENT COMPANY**

6465 Hamilton Ave. • Pittsburgh 6, Pa.

DEPEND ON

Allegheny for

# MAJOR LINES OF EQUIPMENT

Each year more and more users of Stripping equipment find it pays to depend on Allegheny for all their equipment needs. At Allegheny are exceptionally well qualified men to service, repair and rebuild your machines, with large stocks of parts at hand.

PETIBONE-MULLIKEN  
PERFORATED  
DRAGLINE BUCKETS



PETIBONE-MULLIKEN  
SPEEDBALL  
TRACTOR SHOVELS



LINK BELT SPEEDER  
STRIPPING AND COAL  
LOADING UNITS

MAYHEW  
BLAST HOLE  
DRILLS



SALES      SERVICE      PARTS      RENTALS

ALLEGHENY MACHINERY SALES CO., INC.

600 GREENTREE ROAD • PITTSBURGH 20, PA. • WALnut 2-3200

**HEAVY - RUGGED - POWERFUL**



## **Auger at LOWEST Cost With a McCARTHY Coal Recovery Drill because ...**

- 1. SELF-MOVING in  
any direction**
- 2. 2-MAN CREW for  
all augering**
- 3. EASIER  
MAINTENANCE**

There's more profit in every ton of coal augered by a McCarthy coal recovery drill.

A McCarthy drill requires only two men to operate. It moves itself from hole to hole without the help of any extra men or equipment. It delivers more tonnage per horsepower than any other coal recovery drill.

A McCarthy drill stays on the job, producing more of the low-cost coal that means extra profit for you. Maintenance costs are lower too. McCarthy drills are designed and built by pioneers in coal recovery machines. They are heavy, rugged and powerful.

Write or phone for more information on McCarthy coal recovery drills.

*Use McCarthy for More Profit from Every Ton*

*Manufacturer of Drilling Equipment Since 1901*

MANUFACTURED BY

**THE SALEM TOOL COMPANY**  
600 SOUTH ELLSWORTH AVE. • SALEM, OHIO, U. S. A.



Published monthly by Modern Mining Publishing Company. Publication Office—Advance Printing & Litho Co., Erie, Pa. Editorial and Executive Offices, Erie, Pa. Pittsburgh Office: P. F. JASIK, Publisher, 4575 Country Club Drive, Pittsburgh 36, Pa. Price: In the United States, \$8.00 per year; all other countries \$5.00. Single copy 25 cents. Entered as second class matter at the Post Office at Erie, Penna., under the act of March 3, 1879.

*"We have doubled the amount  
of dirt we move since purchasing  
the Cat D9 and that means  
twice the coal output"*



*John A. Thompson*

**John A. Thompson  
Coal Co.  
Bigler, Penna.**



Mr. Thompson bought his Cat D9 in August of 1956 and uses it on a coal stripping operation near Hyde, Pennsylvania. The D9 opens ahead of the stripping shovel and also back fills. There are 18 to 50 feet of overburden to be removed from a 30 to 32 inch seam of "B" vein bituminous coal. Mr. Thompson operates the D9 about 16 hours per day and, as he states above, is "well satisfied." He also claims, "The D9 is perfect for this type of work. We have plenty of power and the fact that everything is hydraulic makes that power easy to handle."



# INCREASE YOUR COAL OUTPUT with CATERPILLAR\* D9 TRACTOR FROM BECKWITH

For more than two years now, the Cat D9 has been in operation on tough coal stripping jobs and has met with overwhelming acceptance. The new 320 Flywheel Horsepower D9 is engineered for bigger-than-ever jobs . . . to increase your coal output . . . to make you more money . . . to speed backfilling . . . to break its own production records.

In no other type of business is the demand so great for proper balance of power, weight, traction and maneuverability at lowest cost. No other tractor meets these demands as well as the Cat D9.

If you want to step up production let us demonstrate the pace-setting D9 on your job. It has power aplenty with 260 HP at the drawbar and yet handles easier than most smaller tractors because of hydraulic boosters which provide easy steering, braking and clutching. Best of all, it's built to stay on the job week after week, month after month with a minimum of downtime because it's rugged and easy to service.

Name the date and we'll demonstrate either the D9 with torque converter or direct drive with oil clutch. Give us a call today!

## COMPARE THESE SPECIFICATIONS

### TORQUE CONVERTER DRIVE

**HORSEPOWER:** (Rated at sea level) . . . . . 320

**OPERATING PERFORMANCE DATA:** Drawbar pull—The Torque Converter drive will automatically adjust drawbar pull to the load within the following speed ranges.

Gear	Forward	Reverse
1	0-4.1	0-4.1
2	0-5.9	0-8.1
3	0-8.1	

**ENGINE:** Four-cycle, valve-in-head, turbocharged, diesel

Number of cylinders . . . . . 6

Bore and stroke . . . . . 6 1/4" x 8"

Piston displacement . . . . . 1473 cu. in.

RPM—governed at full load . . . . . 1240

N.A.C.C. horsepower rating for tax purposes . . . . . 93.6

Lubrication (full flow filtering) . . . . . Full pressure

Crankshaft . . . . . "Hi-Electro" hardened journals

Bearings (Precision-type steel-backed) . . . . . 7 main bearings

aluminum alloy) . . . . . Caterpillar-built

Fuel injection system . . . . .

**CLUTCH AND TORQUE CONVERTER:** Dry-type, single asbestos-faced plate with over-center engagement. Three-stage torque converter using engine fuel for hydraulic fluid. Connected to transmission by double universal joint.

**GENERAL DIMENSIONS:** Gauge . . . . . 90"

Length (over-all) . . . . . 17' 10 1/2"

Height (measured from tip of grouser of standard track shoe to highest point, exclusive of exhaust and precleaner) . . . . . 8' 9"

Width (over-all) . . . . . 9' 11 1/4"

Height drawbar above ground (measured from lower face of standard track shoe) . . . . . 21 1/2"

Ground clearance (measured from lower face of standard track shoe to lowest point of bevel gear case) . . . . . 20 1/2"

**WEIGHT:** Operating (approx.) . . . . . 58,745 lb.

### DIRECT DRIVE

**HORSEPOWER:** (Rated at sea level)

Drawbar . . . . . 260

Engine HP at Flywheel . . . . . 320

### OPERATING PERFORMANCE DATA:

Travel Speeds At Rated Engine RPM Std. Trans. Drawbar Pull (lb.)

MPM	FPM	Gear	Rated	Max.
1.7	150	1	54,200	63,000
2.2	194	2	44,600	52,500
3.0	264	3	30,900	36,600
3.9	343	4	22,400	26,800
5.0	440	5	16,800	20,200
7.0	616	6	10,800	13,450

Reverse (same as forward—6 gears)

Maximum drawbar pulls are calculated from rated pulls and based on the torque increase as the engine slows down under load. The maximum available pull will de-

pend on traction and weight of the fully equipped tractor.

**ENGINE:** Four-cycle, valve-in-head, turbocharged, diesel

Number of cylinders . . . . . 6

Bore and stroke . . . . . 6 1/4" x 8"

Piston displacement . . . . . 1473 cu. in.

RPM—governed at full load . . . . . 1240

RPM—at maximum drawbar pull (point of maximum torque) . . . . . 900

N.A.C.C. horsepower rating for tax purposes . . . . . 93.6

Lubrication (full flow filtering) . . . . . Full pressure

Crankshaft . . . . . "Hi-Electro" hardened journals

Bearings (Precision-type steel-backed) . . . . . 7 main bearings

aluminum alloy) . . . . . Caterpillar-built

Fuel injection system . . . . .

**TRANSMISSION:** Unit construction. Selective-type speed change. Constant mesh helical gears. Filtered, full pressure lubrication for bearings—oil spray directed on gears.

**GENERAL DIMENSIONS:** Gauge . . . . . 90"

Length (over-all) . . . . . 17' 10 1/2"

Height (measured from tip of grouser of standard track shoe to highest point, exclusive of exhaust and precleaner) . . . . . 8' 9"

Width (over-all) . . . . . 9' 11 1/4"

Height drawbar above ground (measured from lower face of standard track shoe) . . . . . 21 1/2"

Ground clearance (measured from lower face of standard track shoe to lowest point of bevel gear case) . . . . . 20 1/2"

**WEIGHT:** Operating (approx.) . . . . . 59,095 lb.

# BECKWITH

MACHINERY CO.

6550 Hamilton Avenue • PITTSBURGH • Phone: MOnrose 1-6900

BRADFORD, PA. • 361-369 Congress St. • Phone 3166

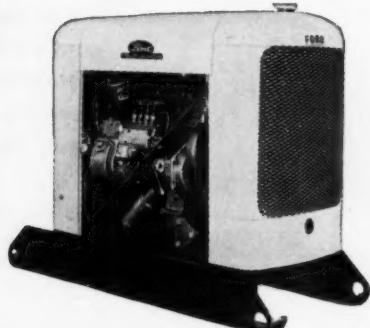
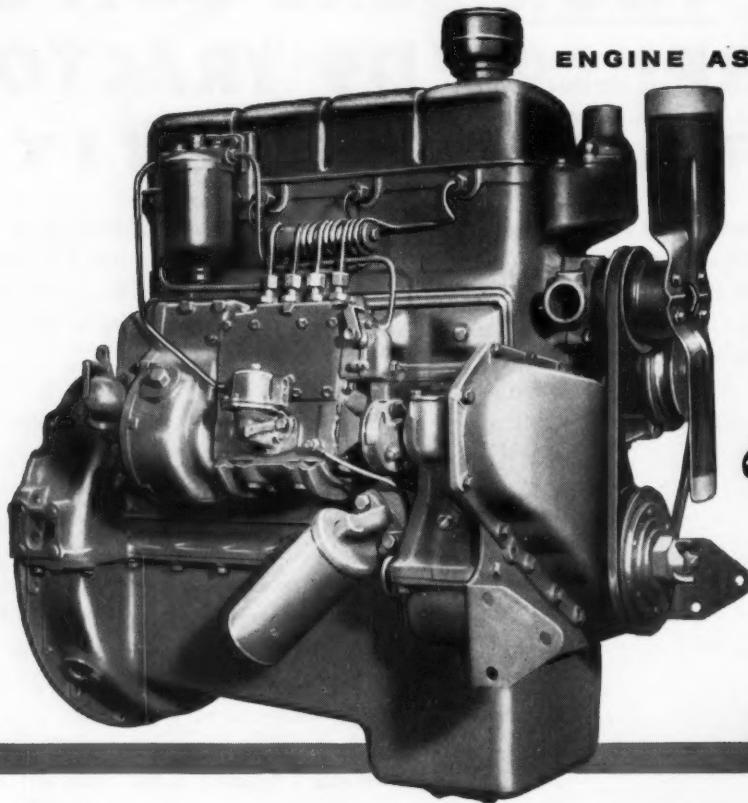
CLEARFIELD, PA. • Old Town Rd. • Phone 5-9635

ERIE, PA. • 1356 E. 12th St. • Phone 4-2494

FARRELL, PA. • E. Broadway • Phone Di. 6-3572

CLARKSBURG, W. VA. • U.S. Rt. 20 • Phone Main 4-5476

## ENGINE ASSEMBLY



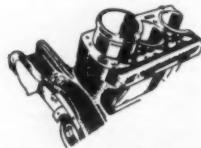
POWER UNIT

*Ford*  
INDUSTRIAL ENGINES  
AND POWER UNITS

**For the newest in diesel power...  
check this FORD "220"**

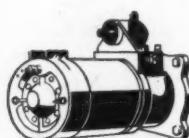
Looking for really *modern* diesel power? You'll find it in the new 4-cylinder Ford "220" Diesel.

Advanced features such as replaceable cylinder sleeves, rotating exhaust valves, aluminum pistons and balanced crankshaft help deliver a full measure of continuous power. In fact, this 220-cu. in. diesel delivers more sustained horsepower at the flywheel than ever before possible in engines of comparable displacement!



WET CYLINDER SLEEVES

Replaceable cylinder sleeves are positively located, yet are easily removable—eliminating costly reboring. Synthetic rubber seal ring at bottom of jacket.



12-VOLT ELECTRICAL SYSTEM

Dependable high-torque 12-volt starting motor provides faster cranking speeds and delivers extra power for quick starts under all weather conditions.

Overhead-valve efficiency boosts economy, makes servicing easier. Rigid deep-block construction extends engine life.

Drop in and see your Ford Industrial Power Dealer for full information on this modern, super-efficient Ford diesel. Or write: Industrial Engine Department, Ford Division of Ford Motor Company, P.O. Box 598, Dearborn, Michigan.

## FORD "220" DIESEL ENGINE SPECIFICATIONS

Basic Model.....	X
Type.....	4-Cyl. Diesel
Bore and Stroke—Inches.....	3.93 x 4.52
Displacement—Cubic Inches.....	220
Brake {	
Dynamometer.....	60 @ 2250
Continuous.....	48 @ 2250
Torque {	
Dynamometer.....	151# @ 1600
Continuous.....	121# @ 1600
Compression Ratio.....	13 to 1

## SOLD AND SERVICED BY:

ALLEGHENY MACHINERY SALES CO., INC. • 600 Greentree Road, Pittsburgh 20, Pa., Phone: WAlnut 2-3200

# COAL MINING

Vol. XXXIV SEPTEMBER, 1957

No. 9

## Contents

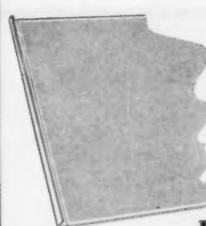
Do You Know	15
Here and There In Coal Industry	15
Stripping Coal in West Kentucky Today	16
Large Tractor and Small Shovel Strip and Load Coal at Hepburnia Coal Company	35
Stripping Sixty Feet of Cover to Get Three Feet of Coal at Mac Coal Company	36
Advertisers Index	40



**BRONZE, HELICAL and WORM GEARS**  
unconditionally guaranteed

**Licking View Tool & Machine Co.**  
CAMDEN ROAD ZANESVILLE, OHIO

Distributed by: BEARING, INC.



## Laubenstein

Perforated Screen and Plate  
MINING — INDUSTRY  
for  
Centrifugal Dryer Plates  
Step Screens  
Conveyor Buckets - Flights

**HAROLD C. LUSK CO.**

3045 W. Liberty Ave.  
Pittsburgh 16, Pa.  
Locust 1-4191

5210 Kentucky St.  
So. Charleston 6, W. Va.  
Popular 8-6258

Published by

**Modern Mining  
Publishing Company**

4575 Country Club Drive

Pittsburgh, Pa. Phone TU. 1-9411

P. F. JASIK, Publisher and Editor

Philadelphia Representative

PAUL S. KEISER

1729 Ridgeway Road Havertown, Pa.



Printed by

ADVANCE PRINTING &  
LITHO CO.

1118 Chestnut St.

Phone 2-2780



**Conte Equipment**  
CORPORATION

SALES — — SERVICE

**M-R-S**  
**GRADALL**  
**TERRATRACS**  
**WOOLDRIDGE**  
**AGRICAT**

Tractors  
Multi-Purpose  
Earth Movers  
Tractors &  
High-Life

**FERGUSON**  
**DAVEY**  
**MILLER**  
**BARNES**

Industrial  
Tractors  
Air Compressors  
Light &  
Stationary  
Tilt-Top  
Trailers  
Water Pumps  
all Types &  
Sizes

**CH&E**  
**MULLER**  
**THOR**  
**BACKLIN**  
**DAVIS**

Boilers  
Concrete &  
Master Mixers  
Air and  
Electric Tools  
Concrete  
Cutters  
Loaders &  
Backhoes

BRandywine 1-4380      Wm. Penn Highway  
Route 22 Monroeville, Pa.

**SALEM "HERCULES" AUGERS FOR ELECTRIC DRILLS**  
Made To Withstand High Drilling Speed Whip And Torsional Strain Of Electric Drills



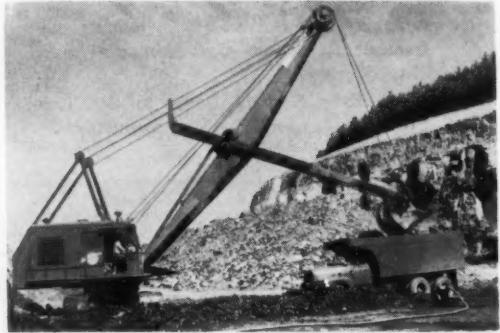
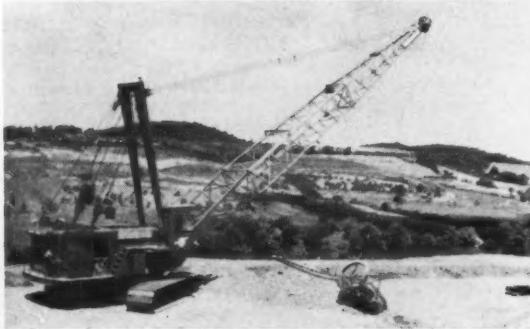
Drills holes faster — Will not snap off shank or chip points — Outlasts four or five ordinary augers.

THE SALEM TOOL COMPANY

SALEM, OHIO, U.S.A.

**in coal stripping too...**

# MANIT



**... for Mays Coal Co. of Clarion, Pennsylvania**

Manitowoc cranes and shovels, geared for high production even in the toughest conditions prove themselves on jobs like this . . .

# ANDE

**EQUIPMENT COMPANY**

MANITOWOC ENGINEERING CORP.

CHAIN BELT COMPANY (REX)

CHICAGO PNEUMATIC TOOL COMPANY

HELTZELL STEEL FORM & IRON CO.

FLEXIBLE ROAD JOINT MACHINE CO.

OWEN BUCKET COMPANY

EUCLID DIVISION G. M. C.

GAR WOOD INDUSTRIES, INC.

# MANITOWOC

**PROVES  
BEST!**



On their stripping operation near New Bethlehem, Pa., Mays Coal Co., gets maximum production with 4 big Manitowocs on the job. With 100' booms and 6 cu. yd. buckets, the two 4500's strip 60' of overburden, while coal loading is handled by the 2 cu. yd. 3500's. Designed for hard, consistent use, these machines prove once again...you'll be yards and dollars ahead with Manitowoc!

# RSO N

RTS. 28 & 519, BRIDGEVILLE, PA.

PRIME MOVER CO.

WHITE MANUFACTURING COMPANY

CAMPBELL EQUIPMENT CO.

CLAYTON MANUFACTURING COMPANY

PHONE LEHIGH 1-6020; CANAL 1-5300

BROWNING MANUFACTURING CO.

MC CAFFERY-RUDDOCK TAGLINE CORP.

ELECTRIC STEEL FOUNDRY CO. (ESCO)

# ALLIS-CHALMERS TRACTORS



HD-21 ... PENN STATE COAL CO.  
Du Bois



HD-11G ...  
HARRISON CONSTRUCTION CO.  
Pittsburgh



HD-21 ... KRISTIANSON & JOHNSON COAL CO.  
Lansc



HD-21 ... COAL RIVER MINING CO.  
Hookersville



HD-16 ...  
JOHN H. BROOKS & SONS  
Monaca



HD-21 ...  
CLARK & KRCHMAR COAL CO.  
Portersville



HD-21 ... NEW SHAWMUT COAL CO.  
Hollywood

HD-6B ... JOSEPH DAVID & SON  
West Middlesex

*Highway*  
EQUIPMENT COMPANY

6465 Hamilton Ave. • Pittsburgh 6, Pa.

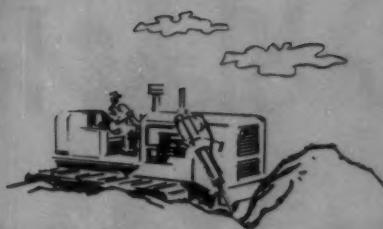


Allis-Chalmers • Lima Shovels, Cranes, Draglines • Master  
General Motors Diesel Engines • Power-Pack Conveyors  
Gar Wood • Lima Roadpackers • Burmeister Mixers and Bins  
Michigan Tractor Shovels and Excavator-Cranes  
Thor • Jaeger

# ...preferred by leading contractors, mines, industrial plants



HD-21 ... SIEGEL COAL CO.  
Clarion



HD-16 ... CLARENCE J. SEMPLE  
La Jose



HD-21 ... ROBERT BAILEY  
Philipsburg



2 HD-21's pushload TS-360 scraper...  
HARRISON CONSTRUCTION CO.  
Saxonburg



HD-6G ... BALDWIN BROS.  
Erie



HD-21 ...  
HITCHMAN COAL & COKE CO.  
Zelienople



3 HD-16's and 2 Model 315 scrapers...  
JOHN H. BROOKS & SONS  
Monaca

Allis-Chalmers • Lima Shovels, Cranes, Draglines • Master  
General Motors Diesel Engines • Power-Pack Conveyors  
Gar Wood • Lima Roadpackers • Burmeister Mixers and Bins  
Michigan Tractor Shovels and Excavator-Cranes  
Thor • Jaeger

**Highway**  
**EQUIPMENT COMPANY**  
6465 Hamilton Ave. • Pittsburgh 6, Pa.



# You CAN drill bigger blast holes a lot faster —

see Reich rigs outdrilling other rotaries by 50% to 80% — and putting down 4 to 8 times as much hole as percussion drills.

**260 ft. of  $7\frac{3}{8}$ " hole in 121 min.**, in medium hard sandstone, 5 holes 52 ft. — that's at rate of **1,389 ft. in 8 hr.** (recently done by Reich C-750, at right, which drills holes to 12 in. diam.).

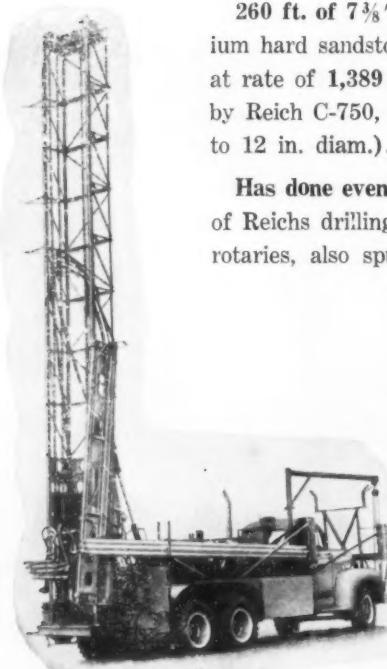
**Has done even better.** Ask us for records of Reichs drilling side-by-side against other rotaries, also spudders.

Reich builds drills for smaller holes — a complete line. And every size is built for **BIGGER PRODUCTION** and **STEADIER SERVICE**, with much sturdier construction than any other rotary drill rig. Make your own comparisons.

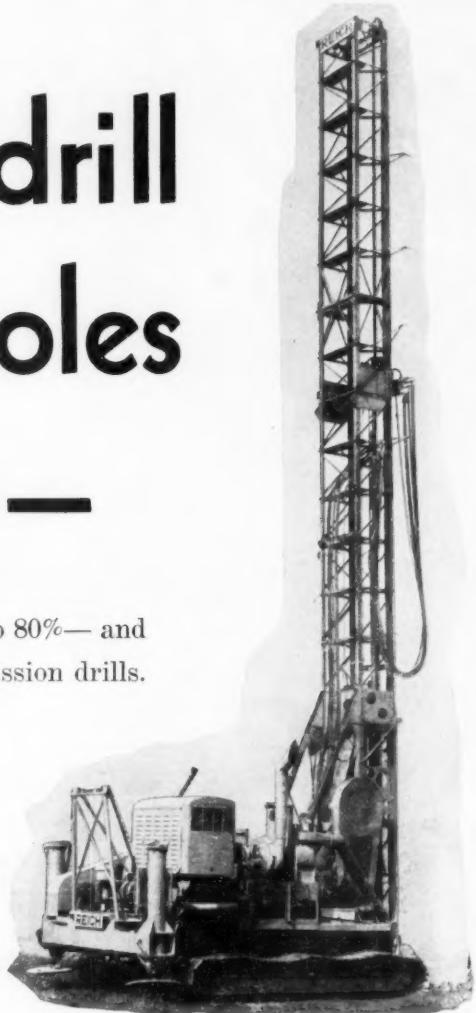
Write for **DRILLING RECORDS** or  
Write, Wire or Phone for a  
**DEMONSTRATION** on your work.

**FRANK SWABB EQUIPMENT CO.**

Hazleton National Bank Bldg., Hazleton, Pa.  
Phone GLadstone 5-3658



Reich T-650. Heavy truck-mounted drill.



Reich C-750. Extra heavy self-propelled crawler drill.

**It will pay you to buy what **REICH** has for you NOW**

(You'll out-drill the machines being built like the Reichs of several years ago.)

this is the **TS-360**

15 yd struck  
20 yd heaped  
280 horsepower



this is the **TS-260**

11 yd struck  
14 yd heaped  
200 horsepower



**now...**

**ALLIS-CHALMERS**  
**BRINGS YOU ANOTHER**  
**NEW MEASURE OF**  
**MOTOR SCRAPER PERFORMANCE**



**the TS-160**

# NEW Allis-Chalmers TS-160

**7 yd struck**

**9.5 yd heaped**

**155 horsepower**

**5 speeds to 25.4 mph**

**12-ton payload**



## Measure these advantages for

**22 hp per struck yard**—Big Allis-Chalmers supercharged diesel engine delivers extra lugging ability for tough pulls, fast loading. Versatile TS-160 can team up with big equipment or work alone on long- or short-haul stripping jobs—handle a wide range of utility jobs, travel at speeds up to 25.4 mph.



**Measure these features**... Allis-Chalmers 516-cu-in. diesel engine—dependable power at all working speeds • Independent, constant live hydraulic power for steering and scraper operation • Low, wide bowl—8-ft, 1½-in. cutting edge... 3-piece, interchangeable cutting edges... double-acting hydraulic bowl lift jacks • Positive hydraulic ejection, high apron lift to full 7-ft, 1½-in. opening • Roomy operator's compartment, easy-to-reach controls, 24-volt direct electric starting, adjustable bucket-type seat, synchronized 4-wheel air brakes • Big push block for all types of pushers—positioned for in-line push • Full-circle visibility while loading, spreading and traveling... operating ease under all conditions • 17½-in. minimum ground clearance in hauling position.



## a wide range of earthmoving jobs . . .

**Turns non-stop in less than 25 ft** with 90-degree hydraulic steering . . . easy maneuverability in narrow cuts, faster cycles without reversing in tight turn-arounds.

**Moves quickly from job to job . . .** when required, transport wheels are available to meet legal load limits for highway travel.



**FULL 90° STEERING**



**Allis-Chalmers, Construction Machinery Division**  
**Milwaukee 1, Wisconsin**

**ALLIS-CHALMERS**

**Engineering in Action**

**GENTLEMEN:** Have the Allis-Chalmers Construction Machinery dealer serving my area arrange a demonstration of the TS-160 motor scraper for me .

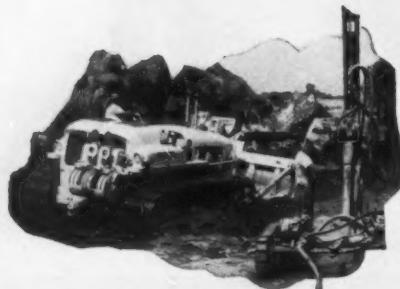
Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Type of work \_\_\_\_\_

# Here's why Euclid TC-12 Twin-Power Crawlers give you MORE WORK-ABILITY



## PERFORMANCE

On a 200' push at a coal mine in Pennsylvania, the TC-12 moved about 440 loose yards per hour.

On a Michigan stockpiling job, the TC-12 moved 796 tons of loose coal in one hour on a 150' push.

On a coal strip mine operation in Ohio where waste banks had to be levelled, a TC-12 produced about 950 yards per hour with a 50' push.



## SPEED

The TC-12 has speed—up to 7.8 mph forward or reverse—but that's not all. Pivot turns (one track forward and one reverse at the same time) plus changing of direction and range under full power without loss of momentum save considerable time during the tractor's daily operation.

## POWER

Two engines with a total of 436 h.p. (413 net h.p. at drive train) make this Euclid "Twin" the world's most powerful crawler. Being more powerful, the TC-12 offers additional benefits, such as faster work and longer engine life, since the engine often operates at less than full capacity without strain. And, the reserve power permits handling the toughest tractor job.

## MANEUVERABILITY

Pivot turns with the TC-12 take less space and time. Changing directions on the go with Torqmatic Drives makes maneuvering into position quicker. Split-half construction gives better traction on uneven ground.

## EASY OPERATION

Clutching and shifting are eliminated with the TC-12 "Twin". There's 24-volt push-button starting and instant response to directional levers, range selector and hand throttle levers, all of which are conveniently located to allow complete freedom of the operator's right hand for control of attachments.

## DESIGNED FOR EASY SERVICING

Many design features contribute to long life and easy servicing. Location of radiator behind operator reduces damage and improves cooling. Track tensioning and recoil system are automatic. All engine accessories are readily accessible from outside the engine compartment. Rollers can be removed without breaking track. Engines, Torqmatic Drives, and planetary final drives can be removed without disturbing the other components.

THEY ALL ADD UP to just one thing—  
Euclids are your best investment.

**EUCLID DIVISION,  
GENERAL MOTORS CORPORATION, Cleveland, 17, Ohio**

# Euclid Equipment

FOR MOVING EARTH, ROCK, COAL AND ORE



## Do You Know?

• Intellectual resources must be substituted for material resources if the United States is to remain free and powerful. Rear Admiral H. G. Rickover, the Navy's top nuclear expert told the nation's top 40 young scientists at the Awards Banquet of the Sixteenth Annual Science Talent Search.

Warning that we have become a "resource-poor" country today, Adm. Rickover charged that there is only one way we can stay on top, and that "is by using far more effectively than heretofore our natural resources in brain power . . ."

"Applied to this problem," he told his young audience, "brain power can devise ways of extracting at reasonable cost the considerable store of low-grade minerals and fuels still remaining to us which we are not utilizing today because of excessive cost in time and labor—thus taconite and shale oil may in time make up for the threatened deficit in high-grade ores and oil. It can discover ways of replacing scarce materials with plentiful materials heretofore considered unusable, as aluminum is replacing scarce copper.

"Trained minds may be able to relieve shortages of natural minerals and fuels by creating man-made substitutes as plastics and synthetic rubber have reduced our dependence on imported tin and natural rubber, or as atomic power may replace coal and oil. Similarly synthetic products made from renewable resources may serve as substitutes for irreplaceable materials."

Adm. Rickover cautioned these promising research scientists of tomorrow that we may have to sacrifice pleasant luxuries, such as large, chrome-trimmed cars powered by high-octane gas, to insure the future for our children.

The 40 teen-agers, all high school seniors, have been attending the Science Talent Institute, conducted by Science Service, and vieing for \$11,000 in Westinghouse Science Scholarships. Adm. Rickover, chief, Naval Reactors Branch, Division of Reactor Development, U. S. Atomic Energy Commission, and assistant chief of the Bureau of Ships for Nuclear Propulsion, Navy Department, spoke before the presentation of the awards.

• The combination of two waste products has promised as useful product that can be used to fuel the nation's industrial furnaces.

Coal silt, a waste product of coal mining, is treated with spent sulfite, a waste from the paper-making industry. The action of the sulfite on the silt results in the formation of a small size fuel that can be used commercially. The invention of Waldemar Hartmann of Mountain Lakes, N. J., it is believed that the process enables operators to exploit a resource that heretofore has been uneconomical to use. Coal silt, Mr. Hartmann points out, is now banked in large dumps near collaries as waste. He was granted patent No. 2,778,718.

## HERE AND THERE IN THE COAL INDUSTRY

• Importers not happy over oil quotas The Administration's program of voluntary cut-backs in crude oil imports seems to be encountering serious trouble from several sources.

On the basis of the first reports filed with the Department of Interior by oil importing companies under the requirements of the plan, only ten of the 22 companies reporting expect to comply by next December with the quotas set by the Government. Capt. M. V. Carson, director of the plan, called for cut-backs to provide a total of only 1,063,000 barrels a day of crude imports. Capt. Carson continued this week to hear oil importing company protests on import quotas.

Among the protesting companies, Gulf Oil Corp. in a letter argued against any changes in the quotas already established. Gulf contended that any compromises in the import cut-backs would touch off a "chain of reactions" of still further changes.

A witness for Sinclair Refining Co., J. E. Dyer, president, told the import hearing session that Sinclair would reject the Government's request to cut its crude oil imports from 74,800 to 62,200 barrels a day. Mr. Dyer told the Interior Oil Program Administrator that Sinclair "favors voluntary restraints on imports" but deplored "any type of Government intervention in private enterprise." In a newspaper interview, Joseph N. Pew, Jr., chairman of the board of Sun Oil Co. took an extremely dim view of the possibility that any voluntary agreements will ever become effective because "there is no conceivable way of securing equity or legality." Mr. Pew also said that "foreign tanks built at low cost and operated cheaply on a fiat currency basis are making it impossible for domestic petroleum to compete economically with foreign oil."

"Therefore," he proposed, "it would seem that, if there is to be a tariff, it should be on freight differentials, ahead of a tariff on oil it-

self." He doubted that a tariff high enough to equalize foreign and domestic crudes "would long be maintained."

On Saturday, July 27, 1957, at its quarterly Safety Meeting, Old Ben Coal Corporation was honored by the presentation of the Joseph A. Holmes Safety Association Certificate of Honor Award to Mine No. 9 for its record in producing 1,127,246 tons of coal without a single lost time accident during the period of February 25, 1956, to October 18, 1956. During this period there were 306,073 man hours worked at the Mine. One fatal accident and about 30 lost time accidents is the average for the bituminous industry in the United States.

The Certificate of Honor was presented by James O'Connor, Assistant Supervisor, United States Bureau of Mines, Vincennes, Indiana, and was accepted for the supervisory personnel and workmen at Mine No. 9 by George Stachura, Mine Superintendent.

Ted Mitchell, West Frankfort, Ill., President of Sub-District No 5, United Mine Workers of America, and officials of the local unions of Old Ben Mines Nos. 9, 14, 21, and 22 were guests of honor. Guests also included Illinois State Mine Inspectors, Theodore Plumlee, West Frankfort, and W. O. Johnston, Christopher, Ill., and Federal Inspectors, Loren Belt, Maurice Messerschmidt, C. L. South, Benn Donna and A. J. Kopp, of Benton, Ill.

• The Board of Directors of NCA, meeting at White Sulphur Springs on September 18, provided for an acceleration of operations of NCA, Bituminous Coal Institute, and the Fuels Research Council.

The Board of Directors voted unanimously to continue the membership dues at 7½ mills per ton of production for the fiscal year beginning Oct. 1, 1957.

# STRIPPING COAL

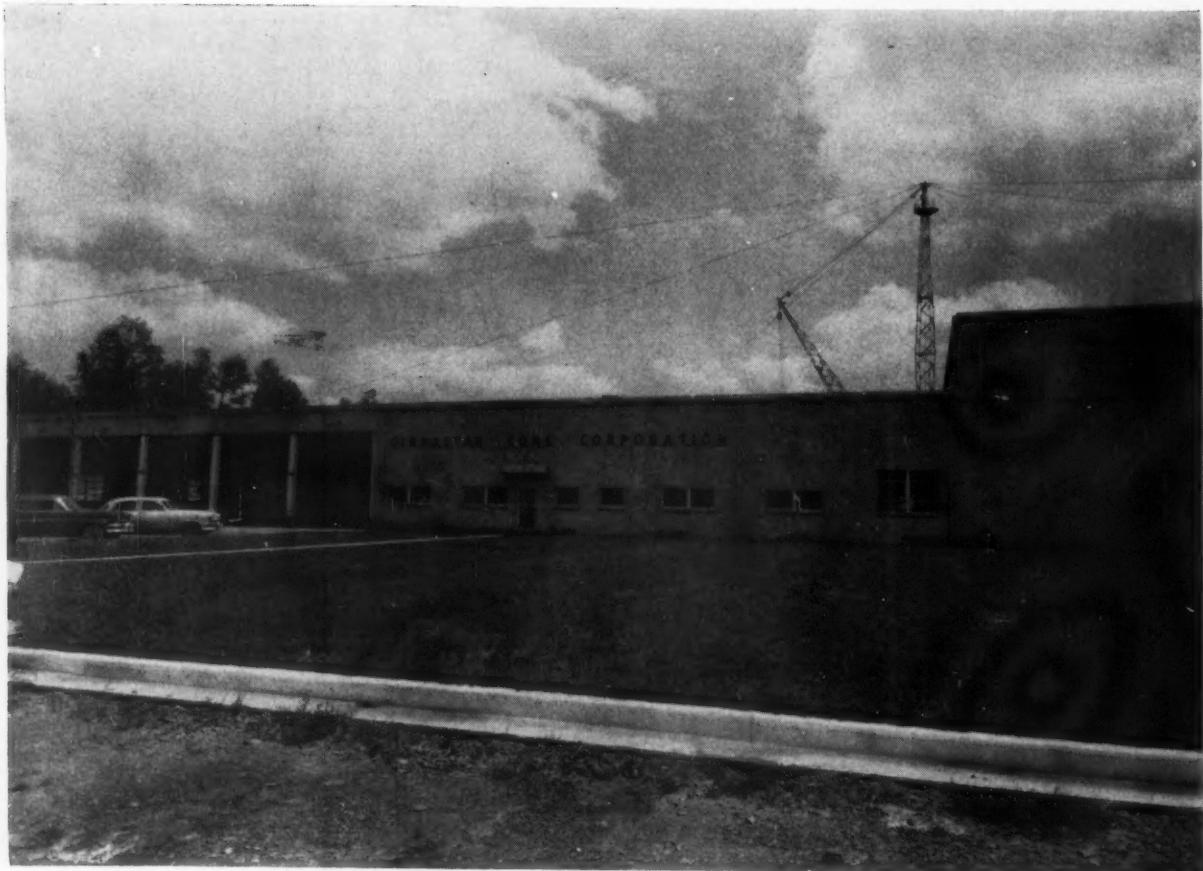
*in*

## WEST KENTUCKY

*Today*

Mans ideas are transient while man himself is permanent. Today's methods of operation will be obsolete tomorrow.

New ideas in man create new incentives for the production of his



Office, repair shop, and garage building at the Gibraltar Coal Company.

wealth as well as for the betterment of his living.

In a basic sense man is a systematic animal. He lives by system of thought which guides his actions. Once man grasps the vantage point of better methods—systematic operation—there is no going back to the old methods he followed.

Technical advances are today playing a great part in the production of man's wealth. Aided by science, technical advances are furnishing answers to questions men consider important, answers that are shared by all mankind. Scientific research made technology which is giving the power men seek. While machines man builds alleviate his burdens and make life more interesting, they do

only what is built into them. Required changes for improvement must come from new ideas of man. Pursuit of truth, wherever it may lead, is the paramount goal of science and scientific research must be employed more by man.

America's dependence on mechanical energy has increased more than 100-fold in less than a century. A constantly increasing portion of that energy is electric power and it is this increased demand for electric power that has changed West Kentucky to one of the most important coal stripping areas.

New conditions in our form of life bring new ideas to men. In West Kentucky a heretofore small river has been dammed to carry standard

size river barges to transport the output of coal economically. Large tracts of coal bearing land were leased or bought outright as close to the river transportation as was possible. These large tracts of coal bearing land permitted the installation of large stripping machinery to produce cheaper and large washing plants to clean the coal economically. One of the largest stripping shovels ever built has been put into operation in the area. Newer ideas call for more improvement in the river transportation. Tomorrow's ideas will bring other and better improvements for better living of man. Thus new ideas come and go while man himself stays.

The following scenes of the latest or more important operations give an eye insight of the projects.



Caterpillar D-9 tractor preparing bench for the earth drill at the Gibraltar Coal Company.



Model 50-R Bucyrus-Erie drill making blast holes at the Gibraltar Coal Company.



Bucyrus-Erie Model 190-B with 10 yard coal loading bucket loading a large haulage unit at the Gibraltar Mine.



Two 5,000-ton storage hoppers built of earth at the Gibraltar Coal Corporation mine near Central City. The belt conveyor at the right feeds raw coal to

either the first or second hopper, and from these two hoppers, the coal is blended and fed to the washing plant shown directly behind these hoppers.

From this point, the washed coal goes to the third 5,000-ton earth hopper shown in the extreme left from which the coal is then fed by belt to the river barges.



NEW  
**CAT**  
**D 353**  
(SERIES C)  
**DIESEL**  
**ENGINE**

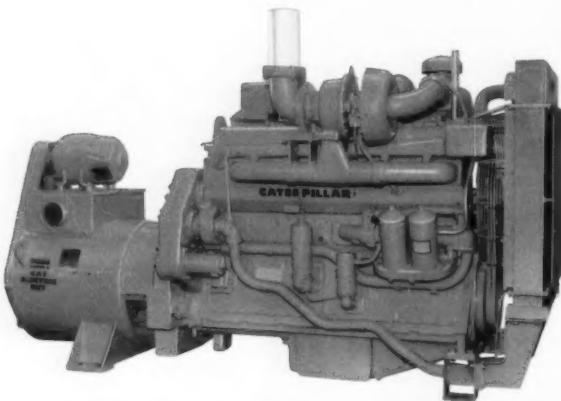
*The engine you've been waiting for!*

**Now Available  
from your  
CATERPILLAR DEALER**

Here it is—the engine that is delivering top performance in the famous Cat D9 Tractor—now available as a separate engine for you to install in draglines, crushers, shovels, trenchers and many other installations.

It's the new Cat D353 (Series C) Diesel Engine—job-proven with thousands of hours of dependable operation.

The 390 HP D353 combines the dependability and economy of diesel power with the power-boosting efficiency of the turbocharger. It is compact, sturdy, and, like all Cat Diesel Engines, built for hard work. Four-cycle design provides a long power stroke that puts diesel fuel to its most effective use. The turbocharger boosts engine efficiency by turning waste energy into working power. Other features include a short, rigid valve train made possible by locating the camshaft high in the block. Hardened steel valve seat inserts and positive valve rotators assure long seat life. The D353 is also available as original power in products of many leading equipment manufacturers and as a marine engine.



**200 KW<sup>††</sup> Cat D353 Self-Regulated Electric Set.** Generator is exactly matched to the Cat D353 (Series C) Diesel Engine. Regulator has no moving parts, and provides steady, self-regulated power.

**BRIEF SPECIFICATIONS**

6-cylinder, 4-cycle valve-in-head diesel: Bore, 6 1/4"; Stroke, 8"; Displacement, 1473 cu. in.

**Cat D353  
Engine**

Length	390 HP <sup>†</sup>	Cat D353 Self-Regulated Diesel Electric Set
Width	75 1/8"	200 KW <sup>††</sup> 60 or 50-cycle
Height (excluding exhaust pipe)	47 1/8"	133 1/8"
Weight	69 1/4"	47 1/8"
	6230 lb.	9610 lb.

<sup>†</sup>Maximum at 1300 RPM    <sup>††</sup>Continuous duty at 1200 RPM

**390 HP<sup>†</sup>**  
**D353**  
(SERIES C)



**When you POWER or**

# Certified Power

... your assurance  
that the power you buy  
is the power you get!

**Certified Power**—this is your assurance *in writing* that you get all the power you pay for! It means that the Caterpillar Engine you buy has passed the most demanding inspection and horsepower tests, and a certificate has been issued and notarized, stating what that engine's horsepower capabilities are. Cat Diesel Engines have an earned reputation for honest, conservative, horsepower ratings, long life and low-cost operation. Now *Certified Power* is another first—another *plus value* you get when you buy a diesel engine built by Caterpillar, sold and serviced by your Caterpillar Dealer.

We're proud to be the first to bring you *Certified Power* in a complete line of Diesel Engines ranging up to 650 HP (maximum output capacity).

Ask us to explain how *Certified Power* Cat Diesel Engines will give you the performance you want!



CATERPILLAR TRACTOR CO.  
ENGINE POWER CERTIFICATION

This is to certify that the Diesel Engine herein described has been engineered, manufactured and tested in accordance with rigid Caterpillar Standards. The materials and workmanship incorporated into this engine give it the inherent capacity for satisfactory performance when applied in accordance with the power ratings established and recommended by this company. The MAXIMUM OUTPUT capacity of this standard production engine is 390 H.P. @ 1300 R.P.M. equipped with air cleaner, water pump, lubricating oil pump, fuel pump, and standard intake and exhaust manifolds.

I certify that B. L. Benson, Supervisor  
of Diesel Engine Test, Caterpillar Tractor Co.,  
signed this certification and I affix my  
seal this First day of July, 1957.

*B. L. Benson*  
Notary Public  
Challanante

*B. L. Benson*  
Supervisor Diesel Engine Test  
Caterpillar Tractor Co.  
Peoria, Illinois

Caterpillar Model D353 Engine  
shipped as follows: Engine Serial No. 4681250 Shipping Date July 1, 1957 was manufactured and  
Power Setting 390 H.P. @ 1300 R.P.M. Maximum Power Rating  
Attachments Heat exchanger Tachometer Drive  
Coolant Starting System Remote Shut-off  
Base Water Cooled Manifold  
Governor Control

POWER RATINGS

**MAXIMUM OUTPUT** is the horsepower capacity of the engine, a measure of the maximum power available that can be developed for five minutes without drop in speed.

**INTERMITTENT HORSEPOWER** is a rating for use in intermittent load applications such as excavators, shovels, and transfer power units, where the power is required for short bursts in one hour or less, with the average output not over 8% of Intermittent Horsepower.

**RATED HORSEPOWER** is a rating for use in applications such as plow mills, hammer mills, and rock crushers where the demand for sustained full power output is 12 hours or less.

**CONTINUOUS HORSEPOWER** is a rating for use in applications such as truck loads and pumps, where the demand for sustained full power output is 24 hours per day, day or night.

horsepower figures are established in accordance with rigid Caterpillar standards. All ratings, converted to sea level barometric pressure (29.92 in. Hg.) and standard temperature (60°F), apply to a production engine including an air cleaner, water pump, lubricating oil pump, fuel pump and standard intake and exhaust manifolds. The above ratings are based on British and American BHP.

Form No. 823-2382

Printed in U.S.A.

**REPOWER use CATERPILLAR**

# Your CATERPILLAR DEALER is your POWER SUPERMARKET!



At our headquarters you'll find the construction world's most complete lineup of equipment built and warranted by one manufacturer, sold and serviced by one dealer organization: CAT\* Engines, track-type and wheel-type Tractors, Traxcavators\*, Scrapers, Dozers, Rippers and Motor Graders. These are available in a selection of sizes with attachments and matched equipment to meet your needs, large or small.

Every working day is "open house" at your Caterpillar headquarters—you're invited to come in and talk over your equipment needs. We will help you analyze your job requirements, bidding and mainte-

nance problems. The many years of experience acquired by our men is at your service.

In addition, we offer you complete parts and service facilities for all your Cat-built equipment. Our men are factory-trained to take care of your service problems quickly and efficiently. Our parts stocks are ample to fill your orders promptly. And, our servicemen and equipment are ready to handle all your service needs, large or small—on your job, or in our shops.

These are but a few reasons why it pays to standardize on Cat-built equipment. We'll show you many more. Name the date—we'll demonstrate!

## BECKWITH MACHINERY COMPANY

6550 HAMILTON AVENUE, PITTSBURGH, PA. • OLD TOWN ROAD, CLEARFIELD, PA. • EAST BROADWAY, FARRELL, PA.  
361-369 CONGRESS ST., BRADFORD, PA. • 1356 E. 12TH ST., ERIE, PA. • BUCKHANNON PIKE, CLARKSBURG, W. VA.

## CLEVELAND BROTHERS EQUIPMENT CO., INC.

ROUTE 322, HARRISBURG, PA. • ROUTE 309, WILKES-BARRE, PA.  
ROUTE 122-STATE ROAD, FRACKVILLE, PA. • P. O. BOX 431, PHILIPSBURG, PA.

## OHIO MACHINERY CO.

6606 SCHAAF ROAD, CLEVELAND, OHIO • 930 KINNEAR ROAD, COLUMBUS, OHIO • 2807 REYNOLDS ROAD, TOLEDO, OHIO  
U. S. ROUTE 250, CADIZ, OHIO • 4000 LAKE PARK ROAD, YOUNGSTOWN, OHIO

## WALKER MACHINERY CO.

1545 HANSFORD STREET, CHARLSTON, W. VA. • 4010 EMERSON AVE., ROUTE #2, PARKERSBURG, W. VA.

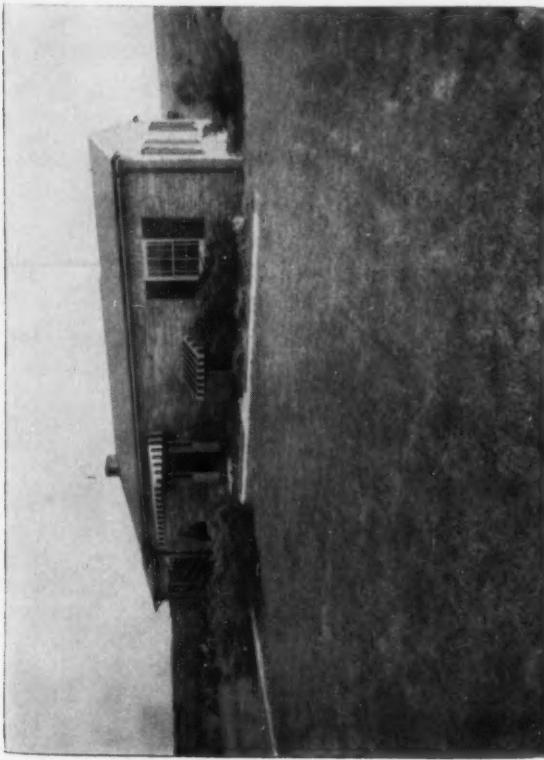
CM-6

DE1557

Printed in U.S.A.

*It pays to standardize on* **CATERPILLAR**®

\*Caterpillar, Cat and Traxcavator are Registered Trademarks of Caterpillar Tractor Co.



Modern Office building at the Ken Mine of the Peabody Coal Co.



Caterpillar D-9 tractor clearing terrain for the Bucyrus-Erie 40-R blast hole drill at the Ruby-Chandler-Jordan operation.



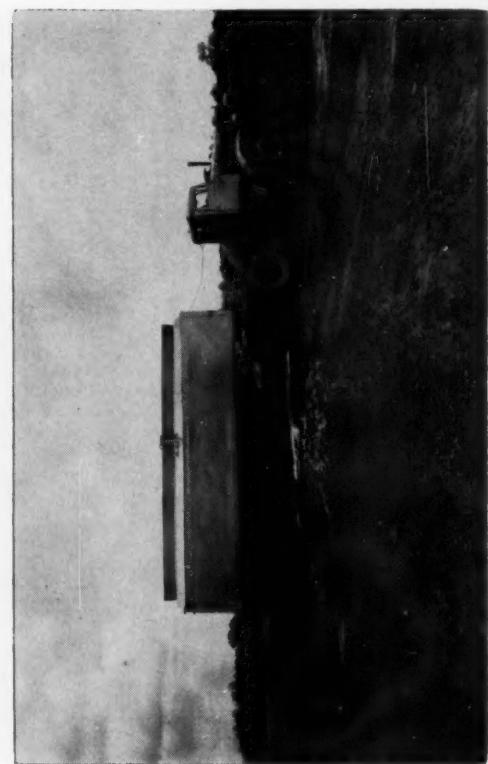
Two 50 ton Euclid haulage units at the Gibraltar Coal Company.



This electrically driven Bucyrus-Erie Model 120 shovel with 8 yard coal loading dipper is loading a 50 ton Euclid haulage unit at Ken Mine of the Peabody Coal Co.



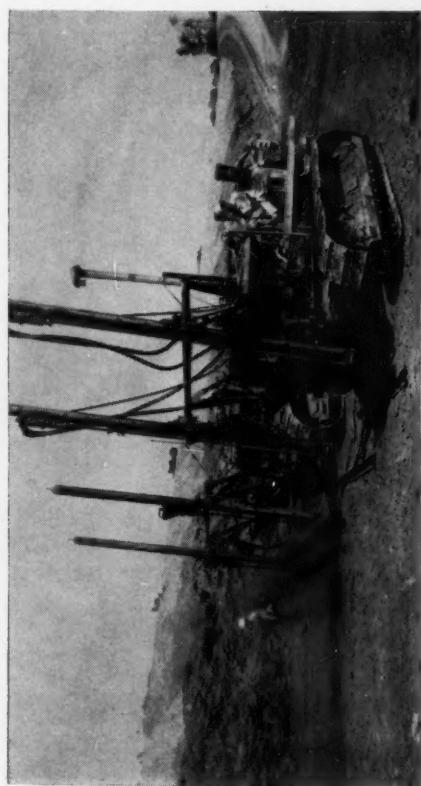
This Caterpillar rubber tired tractor cleans the surface of stripped coal at the Ken Mine.



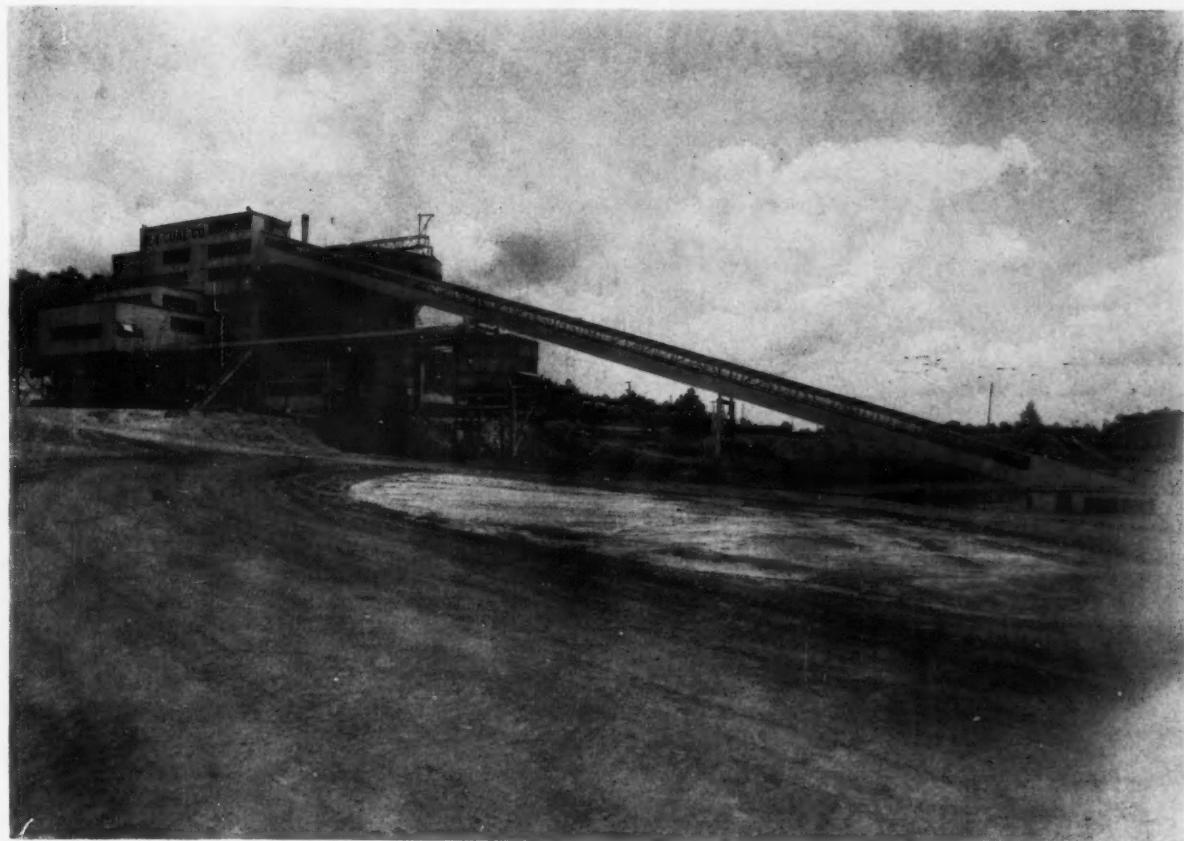
Water for allaying road dust is sprayed from this truck at the Ken Mine.



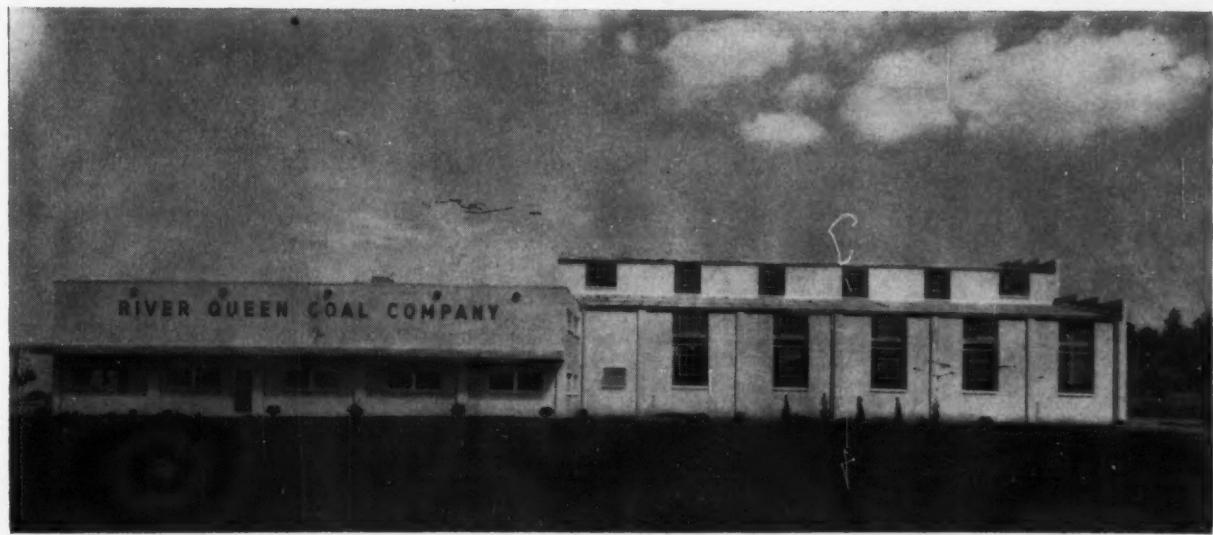
The Bucyrus-Erie 40-R blast hole drill at the Ruby-Chandler-Jordan operation.



Three tractor mounted drill making shot holes in coal at the Ruby-Chandler-Jordan operation.



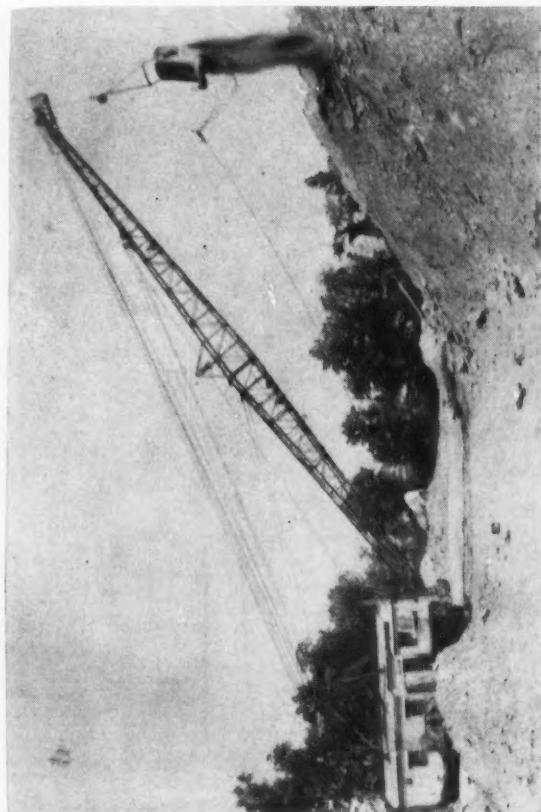
All of the Ken Mine output is washed in this modern washing plant.



Office and garage building at the River Queen Coal Co.



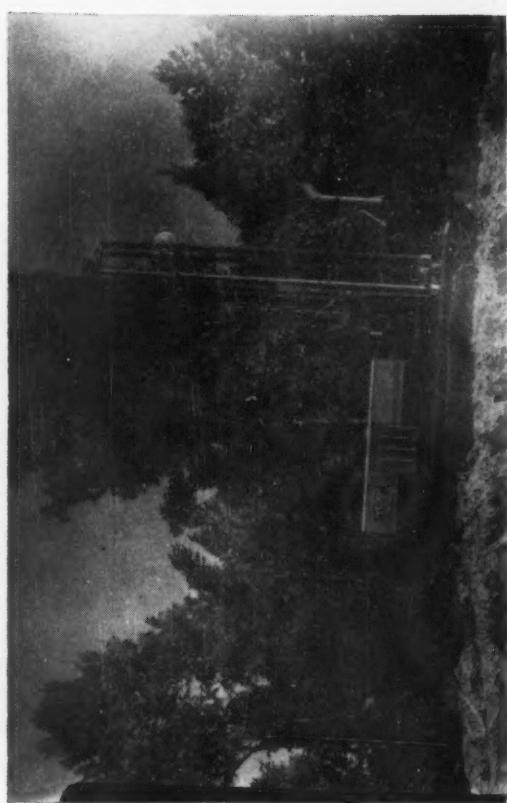
Model 750 Bucyrus-Erie shovel with 20 cubic yard dipper working at the Paradise Coal Co.



Model 200-W Bucyrus-Erie dragline with 6 yard bucket stripping slate lying between two seams of coal.



All the output of the Ken Mine is loaded onto barges at this river loading dock.



Bucyrus-Erie Model 50-R drill making blast holes at the River Queen Coal Co.



This is the largest stripping shovel in the area, a Bucyrus-Erie unit with a 60 cubic yard dipper.



Coal preparation plant at the Paradise Coal Co.



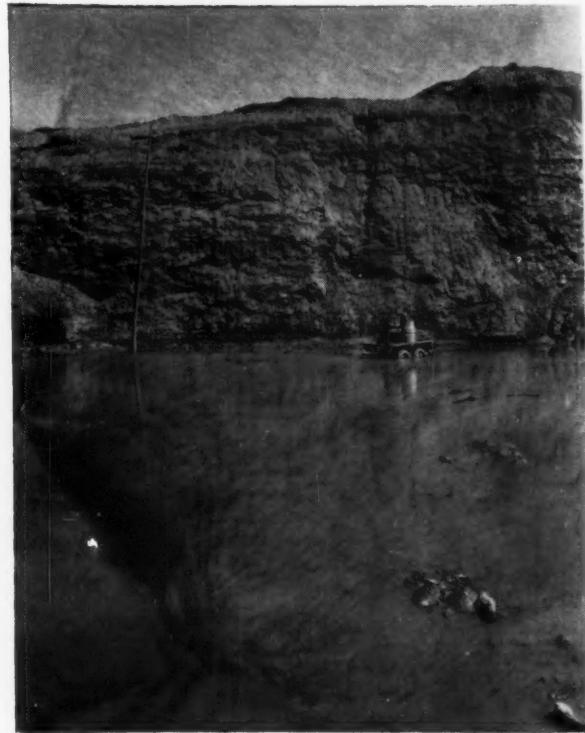
Loading out the coal of the lower seam at the Paradise Coal Co.



Over-all view of the Ruby-Chandler-Jordan operation. In the foreground is a Bucyrus-Erie Moniaghan 5-W dragline.



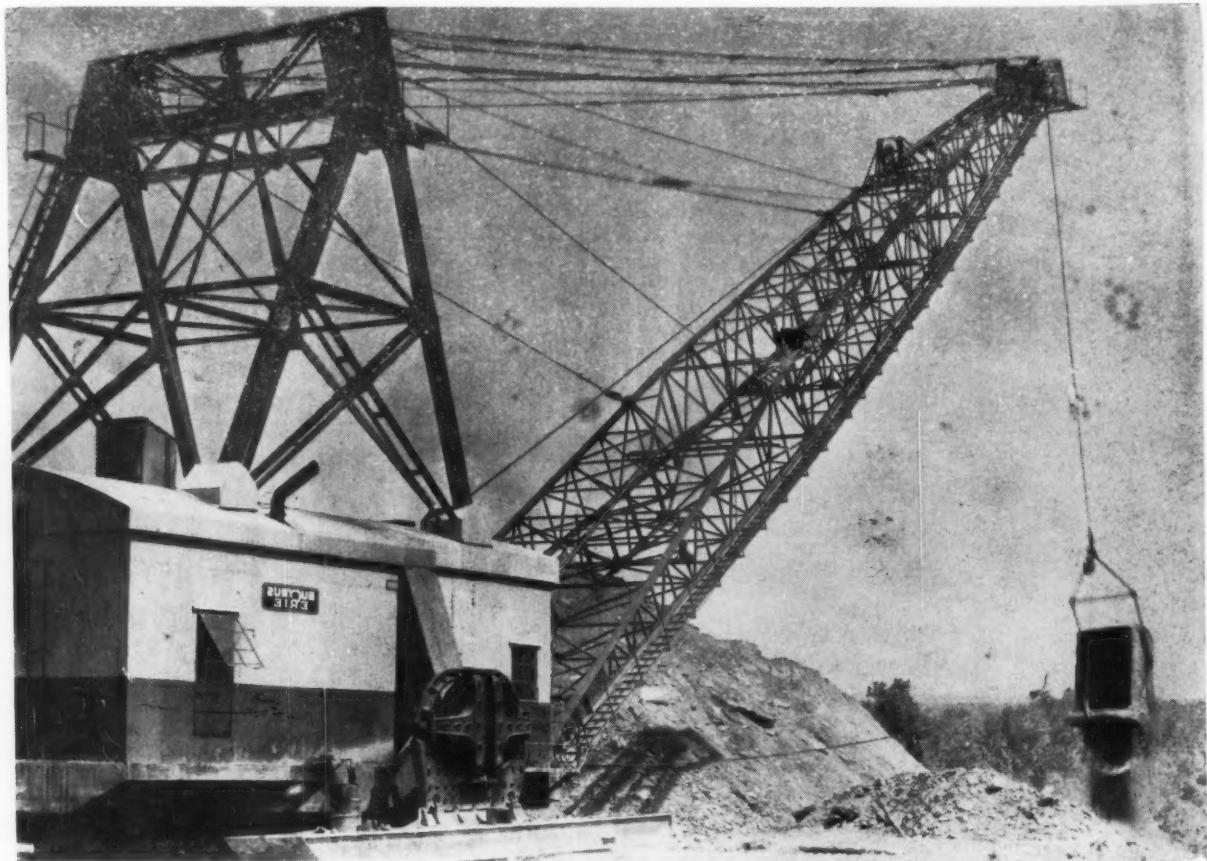
Bucyrus-Erie 54-B shovel loading out coal at the Ruby-Chandler-Jordan operation.



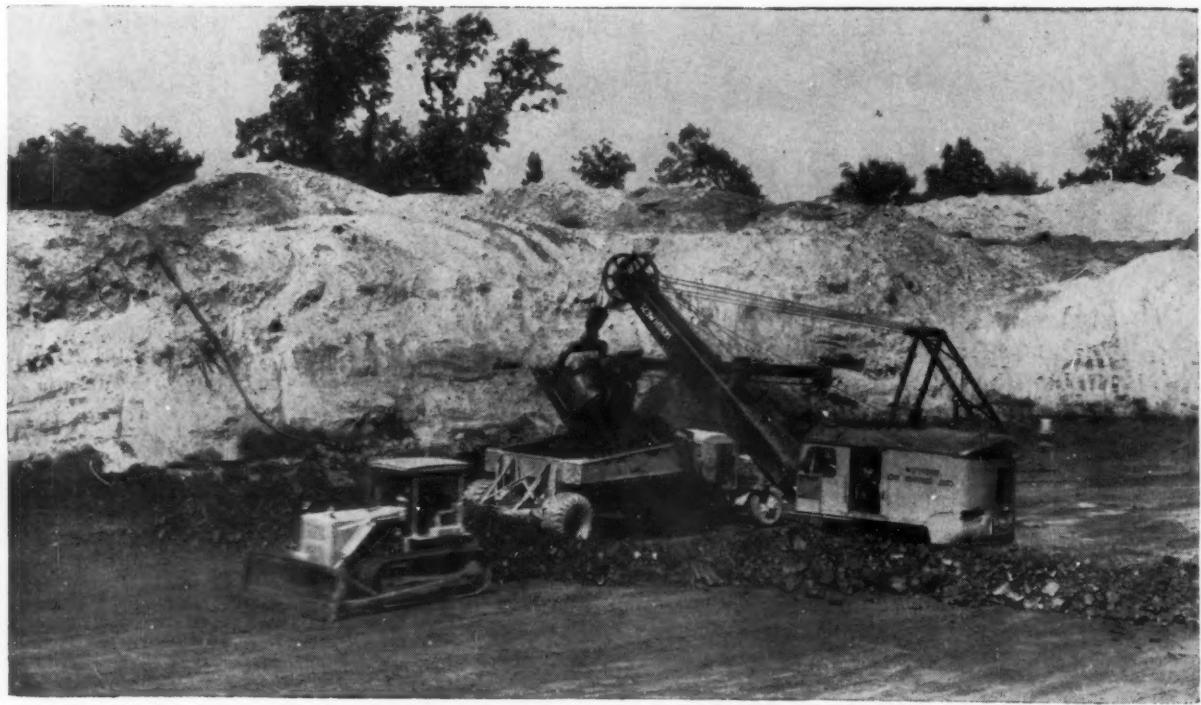
Rubber tire mounted 4-inch Jeager pump working against 70 ft. head at Ruby-Chandler-Jordan operation.



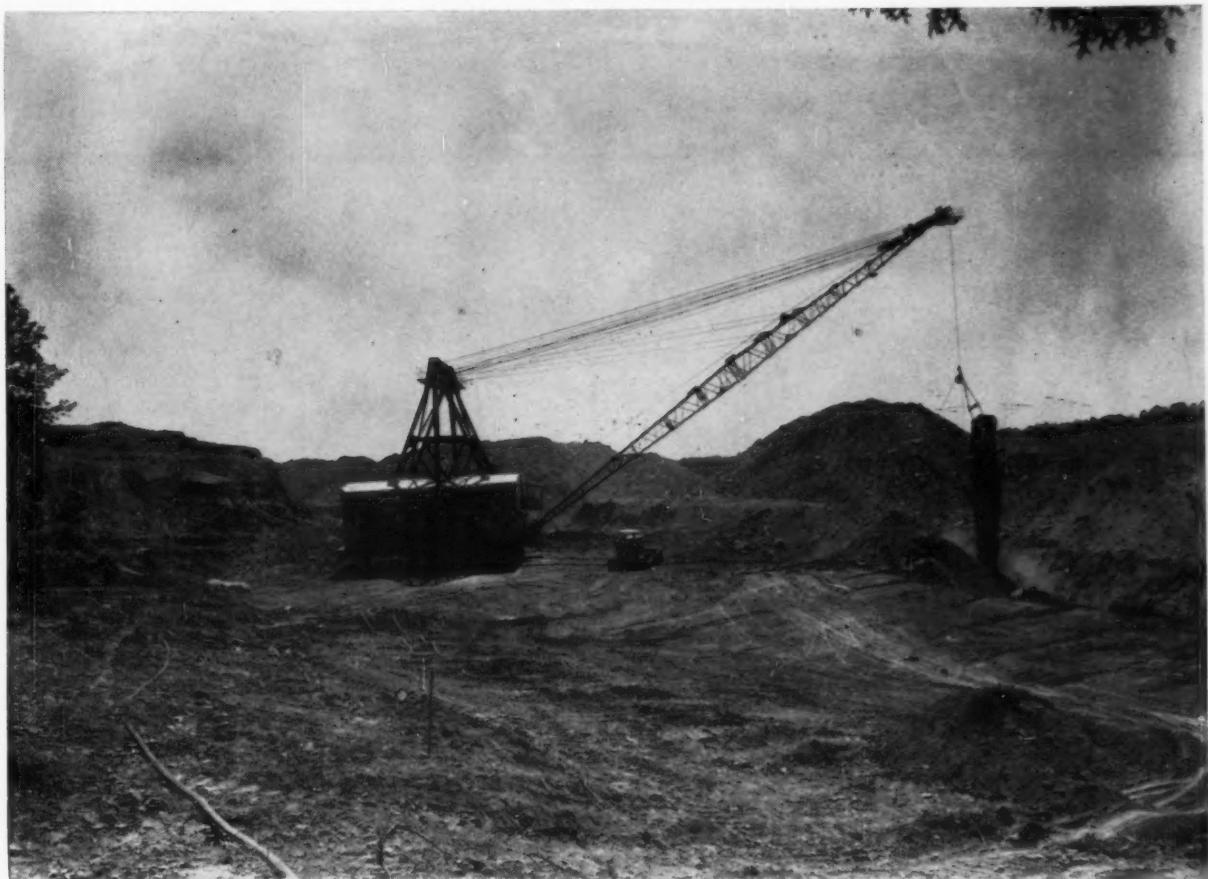
McCarthy blast hole auger working at River View Coal Co.



Bucyrus-Erie Model 480 dragline with 160 ft. boom and 14 yard bucket powered by 1000 hp. engine.



Loading out coal at the River View Coal Co.



Marion Model 7400 dragline stripping at the Hart & Hart operation. An Allis-Chalmers HD 21 tractor is working with dragline.



Caterpillar D-9 tractor with ripper attached pushing top layer of overburden and making road for the large stripping unit at the River View Coal Co.



Bucyrus-Erie 40-R drill making blast hole at the Hart & Hart operation.



Over-all View of the Pit of the Scott-Wood Coal Co. one of the small operations in the area.



Manitowoc Model 4500 shovel working in a pit of the Hart & Hart Coal Co. The other Manitowoc unit is a dragline.



Allis Chalmers HD-21 tractor working with Manitowoc dragline at the Hart & Hart Coal Co.



Showing two seams of coal separated by layer of lime rock at the W. G. Duncan Coal Co. The rock between the coal is crushed and sold to other strip mines for road building.



This 20 foot thick layer of gray soapy rock overlay the coal seam at Hart & Hart Coal Co.



Floating electric, 10-inch manifold pump at Hart & Hart Coal Co. which has 4 six inch discharges. Discharge outlets are plugged as head increases.



Showing crushed rock road at the W. G. Duncan Coal Co.



Caterpillar D-8 and D-9 tractors pushing overburden at the Scott-Wood Coal Co.



Crushing and loading plant at the Scott-Wood Coal Co.

# Large Tractor and Small Shovel Strip and Load Coal at Hepburnia Coal Company

The Hepburnia Coal Company, operating near the Community of Hepburnia, Clearfield County, Pennsylvania, uses a Caterpillar D9 and a Link Belt Model LS98 shovel to strip and load out the coal.



Caterpillar D-9 tractor pushing overburden off the coal.

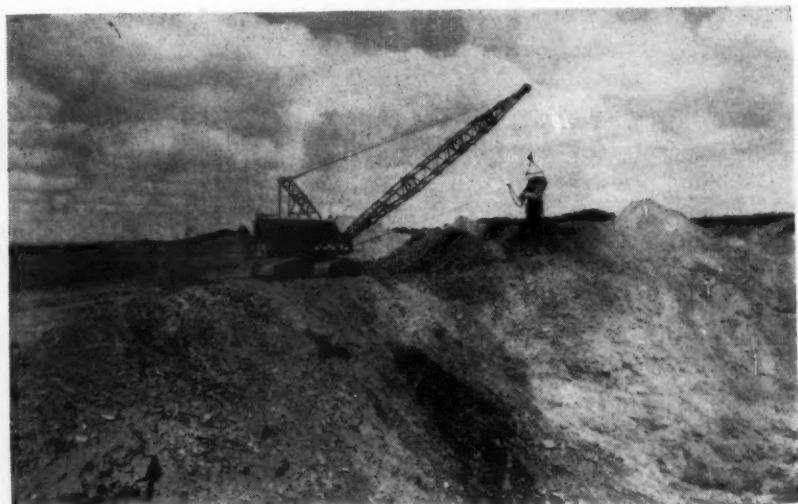


Allis Chalmers HD21 tractor preparing road bed for blast hole drill and stripping shovel at the Boron Coal Co., LeContes Mills, Pa.



Link-Belt Model LS 98 shovel spoiling overburden.

## Stripping Sixty Feet Of Cover To Get Three Feet Of Coal At Mac Coal Company



The Model 580 Link-Belt Dragline moving overburden.



The Caterpillar D-9 tractor cleaning the surface of stripped coal and pushing it toward stripping shovel for spoiling.



The Model 480 Link-Belt Shovel loading out coal.

Stripping the Lower Kittanning seam of coal near Sligo, Pennsylvania, the Mac Coal Company is using a Model 580 Link-Belt Dragline with 75 foot boom and two and one half cubic yard bucket to move up to 60 feet of overburden consisting of yellow and gray shale.

The seam of coal averages 30 inches in thickness.

The coal is loaded out with another Model 480 Link-Belt shovel having 35 foot boom, 30 foot stick and one and one half cubic yard dipper. This shovel was originally used for stripping when first purchased more than 21 years ago and is still operated by the same operator. A Caterpillar D-9 Tractor is used for general utility work.

## LOWBOWL Now Available on Caterpillar D7

• LOWBOWL scraper design has now been made available for use with the Caterpillar D7 Tractor. Announcement of the No. 435 LOWBOWL Scraper has been made by Caterpillar Tractor Co.

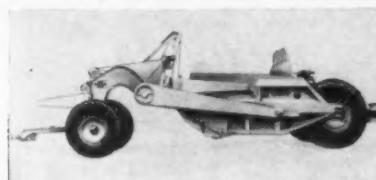
The new, four-wheel scraper, which replaces the Caterpillar No. 70 Scraper in the company's line, incorporates many operational and dimensional features which result in higher production and a resultant lower cost per yard of earth moved.

As with the other Caterpillar LOWBOWL Scrapers, the low silhouette of the No. 435 allows material to enter the scraper with a minimum of lifting effort and material-to-material friction. On a comparative basis, the No. 435 Scraper offers 38.6 sq. ft. of bottom area to 31.0 sq. ft. for the No. 70, and increase of 6.7 sq. ft. for the new scraper. This increase helps to provide the new unit with a struck

capacity of 13 yds., an increase of 27% over its predecessor model.

Because of its additional width, the No. 435 Scraper provides a broader base for heap loading, and can transport 18 cu. yds. of heaped material.

Due to the benefits of LOWBOWL design, the No. 435 is capable of these greater capacities though the



LOWBOWL scraper design, long a feature of Caterpillar Tractor Co.'s larger model scrapers, has now been made available for use with the Cat D7 Tractor. Designated the No. 435 Scraper, the new unit has a struck capacity of 13 cu. yds. and a heaped capacity of 18 cu. yds. The low-slung configuration of the No. 435 allows material to enter the scraper with less lifting effort required, and a minimum of material-against material friction.

height of its sides is 2 in. lower than those of the No. 70 Scraper. Further, to assure thorough, positive ejection, the No. 435 is designed with an ejector of increased height, and greater apron opening. Protection against fouling of the draft arms due to rock spillage over the scraper sides is afforded by the incorporation of rock guards as standard on the new unit.

Another feature attributed to the low silhouette of the No. 435 Scraper is greater stability, due to the lowering of the loaded unit's center of gravity. Additionally, the wider base of the scraper increases the width of cut to 9 ft. 4 in. from the previous model's 8 ft. 6 in.

From the standpoint of versatility, the No. 435 is large enough to be economically used with the Caterpillar D8 Tractor as well as also being available for use with the D6 Tractor.



Mountainous Loads—New special off-highway Autocar diesel truck dumps load of coal at tipple of Amherst Coal Co.,

Rensford, W. Va. Fleet of five Autocars hauls 3,500 tons per day from mine over a twisting three-mile mountain route.

• A new general catalogue covering Hoffman "Oriented Diamond" Drill Bits has just been released for distribution. Especially designed for quick easy location of important Drill Bit data, Hoffman's new catalogue lists sizes, setting charges, weights, uses, etc. for all standard bits. New up-to-date price sheets are being distributed along with the catalogues which are available free upon request from Hoffman Bros. Drilling Co., Punxsutawney, Pa.



HOFFMAN BROS.  
DRILLING COMPANY  
PUNXSUTAWNEY, PA.



## USED EQUIPMENT

Item: 557-WV238 Caterpillar D8 Diesel Tractor with Angledozer and Rear Cable Control Unit. Installed one new injection pump, checked others; rebuilt governor assembly; rebuilt master clutch and checked transmission.

"CERTIFIED BUY"  
F.O.B. \$7900, Clarksburg, W. Va.

Item: 557-WV239 Caterpillar D8 Diesel Tractor with Caterpillar 8A Bulldozer and Rear Cable Control Unit. This is a late 8R Series tractor with rebuilt exchange engine. The engine was installed by customer about 3 months before trade-in. Refaced mold-board, rebuilt magneto, rebuilt seat cushion and back rest. \$7750 F.O.B., Clarksburg, W. Va.

Item: 657-P621 Caterpillar Model D8 Tractor with Caterpillar 88 Straight Blade and No. 25 Cable Control Unit. Tuned di-gel engine and starting engine; installed new master clutch; repaired upper shaft in transmission and installed new pinion seals and dog-house seals; replaced heavy duty equalizer spring; installed new idler wear strips; replaced seals in 25 cable control and replaced moldboard on 88 blade.

"CERTIFIED BUY"  
\$15,500.00 F.O.B. Pittsburgh, Pa.

Item: Caterpillar D8 Diesel Tractor with Caterpillar No. 25 Cable Control and Angledozer. Cable control unit in good condition, bulldozer in fair condition, tractor in fair condition. Steam cleaned, painted and redecaled. "AS IS WHERE IS"  
\$4500 F.O.B. Clarksburg, W. Va.

Item: 556-C293 Caterpillar Model D7 Tractor with No. 25 Cable Control and 78 Bulldozer Blade. Tracks about 30% good. Rollers 50% good.

\$4864.00 F.O.B. Clearfield, Pa.

Cat. and Caterpillar are trademarks of Caterpillar Tractor Company. All items subject to prior sale.

## BECKWITH MACHINERY COMPANY

6550 Hamilton Avenue, Pittsburgh, Pa.  
381-389 Congress St., Bradford, Pa.  
Old Town Road, Clearfield, Pa.  
1336 E. 12th Street, Erie, Pa.  
E. Broadway, Farrell, Pa.  
Buckhannon Pike, W. Va., Route 20 (5a).  
Clarksburg, West Va.

**Save on Your  
INDUSTRIAL  
TRACK**

**FOSTER  
QUALITY**

**FULLY  
GUARANTEED**

**RELAYING RAILS**

Handle more cars better—cost less to install and maintain. Foster stocks all Rail Sections 12# thru 175#, Switch Material and Track Accessories.

SEND FOR CATALOGS

RAILS - TRACK EQUIPMENT - PIPE - PILING

**L.B. FOSTER CO.**

PITTSBURGH 30 • NEW YORK 7 • CHICAGO 4  
ATLANTA 8 • HOUSTON 2 • LOS ANGELES 5

## Shovels - Draglines Drills Cranes - Euclids

7400 Marion Dragline, 160', 13 yard.  
625 Page Diesel Drag, 150', 10 yard.  
4500 Manitowoc Drag, 120', 5 yard.  
621-S Page Diesel, 135', 6 yard.  
7-W Monighan Elec. Drag, 120', 7 yard.  
618 Page Diesel Drag, 120', 5 yard.  
5-W Bucyrus Monighan Drag, 120', 5 yard.  
2400 Lima Dragline, 130', 5 yard.  
111-M Marion Diesel Drag, 100', 4 yard.  
1055 P&H Dragline, 80', 3 1/2 yard.  
1201 Lima Dragline, 85', 3 yard.  
1201 Lima Comb. Shovel & Crane.  
955 P&H Dragline, 90', 2 1/2 yard.  
54-B Bucyrus-Erie Drag, 85', 2 1/2 yard.  
3500 Manitowoc Drag, 85', 2 1/2 yard.  
40-A Marion Drag, 90', 2 1/2 yard.  
2000-B Manitowoc Cranes  
604 & 802 Lima Cranes.  
151-M Marion Elec. 5 yd. Shovel.  
4500 Manitowoc 5 yd. H.L. Shovel.  
1601 Lima 4 yd. Standard Shovel.  
120-B Bucyrus-Erie 4 yd. Electric Shovel.  
1201 Lima Standard 3 1/2 yd. Shovel.  
1055 P&H 3 1/2 yd. Standard Shovel.  
1201 Lima 2 1/2 yd. H.L. Shovel.  
955 P&H 2 1/2 yd. Standard Shovel.  
802 Lima Comb. H.L. Shovel & Drag.  
54-B Bucyrus-Erie 2 1/2 yard H.L. Shovel.  
51-B Bucyrus-Erie 2 yd. Shovel.  
Unit 1020 3/4 yard Shovel.  
P&H, Lorain, Bucyrus-Erie Truck Cranes.  
600 Reich Heavy Track Mounted Rotary Air Drills.

58-BH Joy Champion Rotary Air Drills.  
McCarthy Coal Auger Drill.  
Compton Coal Auger Drill.  
Mayhew Rotary Truck Mounted Air Drills.  
Portadrill Truck Mounted Air Drill.  
Euclid Trucks—Bottom & Rear Dumps.  
Caterpillar, International & Allis-Chalmers  
Bulldozers.  
42-T, 29-T and 27-T Well Drills.

## FRANK SWABB Equipment Co., Inc.

313 Hazleton Nat'l Bank Bldg.  
Hazleton, Pa., Gladstone 5-3658

## FOR SALE Strip Equipment

- 1—Marion 40A Dragline, No. 8513, 80' Boom 3 yd. Bucket.
- 1—P&H 955 Dragline, No. 7941, 80' Boom, 3 yd. Bucket.
- 1—P&H 655B Shovel, No. 11576, 1 1/2 yd. Bucket.
- 1—D-8 Angle Dozer.
- 1—D-7 Dozer  
Spare parts for above at reduced prices.

Write or Call

GREENSBURG-CONNELLSVILLE  
COAL & COKE CO.  
1100 Union Trust Building  
Pittsburgh 19, Penna.  
ATTN: Mr. G. R. Ondrako  
Telephone—Atlantic 1-1576 or  
Burgettstown, Pa.—Whitney 7-9627

## FOR SALE

Joy 10 RU Cutting Mach. 440 V or 220 V—AC.  
Manitowak 4,500 Dragline, 5 yd.  
Joy 8 BU Loaders 230 V & 500 V—Bargain.  
Joy 3 JMC—2 CE Continuous Miner—A1  
G.E. 30 ton Locomotive 20 V also 550 V..  
Condition  
Jeff. L600 Loading Mach. Parts, New &  
Low Price.  
Goodman 460 Loader, New Parts...Low  
Price.  
Mine Hoist 600 HP. Complete & Hoist 60 HP.  
Int. 18A tractor—Buc. E. Angle Dozer—Good.  
Osgood Dragline 2 yd. 70' Boom, D17,000  
Cat. En.  
Lorain 820 shovel 2 yd.—34' B. 26' S.—  
13,000 C. E.  
Marion 111M Dragline 5 yd.—Reconditioned.  
Allis-Chalmers generator 300KW—20V.  
Jeffery 29V Cutters & L600 Loaders.  
Smith Deep Well Pump 2,00 gal. Minute.  
Will Buy 13 ton loco 500 V.

## T. L. SIMPSON

MACHINERY AGENT AND BROKER

1200 Woodbourne Ave. Pittsburgh 26, Pa.  
Phone LEhigh 1-2254

## FOR SALE

A Roberts & Schafer Super-Air flow Pneumatic Coal Cleaner, 6 ft. wide x 4'-6" long.  
For 75 P.H. of 1 1/4 by 3/8" raw coal.  
Plant located at Joanne Mine,  
Rachel, W. Va.

For further information write  
or call

JOANNE COAL CO.  
1100 Union Trust Building  
Pittsburgh, 19, Pa.

# Our Theme Song "ALWAYS"

Irving Berlin never heard of J. T. FISH—but his great song "ALWAYS" certainly tells our story on mining equipment of any kind. Whenever you have any mines, plants, rails, or equipment of any kind to dispose of from one item to a trainload J. T. FISH will buy it—ALWAYS! Always—and at fair prices! Always—for spot cash! Our huge buying power (the largest stock anywhere) makes it a NATURAL for us to offer the Best deal on equipment we have for sale.

## WE OWN WHAT WE ADVERTISE

### JOY EQUIPMENT — REBUILT

- 1—Joy 8AE Super 14BU Loader, rebuilt.
- 2—Joy 14BU Loaders, low pedestal, 7AE.
- 2—Joy 14BU Loaders, medium pedestal, 7RB.
- 1—Joy 14BU Loader, high pedestal.
- 2—Joy 12BU Loaders, 9E, latest type.
- 1—Joy 20BU Loader, latest type.
- 1—Joy 11BU Loader.
- 1—Joy 11BU Loader, latest type.
- 2—Joy 8BU Loaders, 250 volt DC.
- 1—Joy 8BU Loader, 34" overall height.
- 2—Joy 8BU Loaders, 220 volt AC.
- 2—Joy curved bar heads, complete.
- 12—Reliance 38-J Motors, 10 H. P.
- 6—New Wheel Units for Joy 6 SC Shuttle Car.
- 2—Goodman 660 Loaders on cats, excellent.
- 3—Goodman 665 Loaders on cats, latest type.
- 4—Joy 6SC Shuttle Cars, rebuilt.
- 1—Joy 5SC Shuttle Car, rebuilt.
- 2—Joy 32E9 Shuttle Cars.
- 2—Joy 32E10 Shuttle Cars, rebuilt.
- 2—Joy 32E15 Shuttle Cars, rebuilt.
- 1—Joy 32B16 Shuttle Car, rebuilt.
- 2—Joy T-2-5 low ton Cat Trucks.
- 2—Joy T-1 Standard Cat Trucks, 220 AC.
- 1—Joy T-1 Standard Cat Truck, 250 DC.
- 2—Joy 11B Cutting Machines, like new.
- 1—Joy 7B Cutting Machine, like new.
- 2—Goodman 512 Machines with Bug-dusters.
- 1—Goodman Machine on Cats, 31" high. All hydraulic.
- 1—Goodman 512 Cutting Machine, perfect.
- 2—Goodman 512 Cutting Machines, 220 volt AC.
- 1—Lee Nose low vein Machine Carrier.
- 1—Lee Nose low vein Machine Carrier on rubber.
- 2—Jeffrey 70URB's, rubber-tired Cutters, Universal head, perfect condition.
- 2—Joy 11RU rubber-tired Cutters with bug-dusters, universal head and dual tires.
- 4—Jeffrey 29UC Cutting Machines, Universal Head, cuts anywhere in seam, 38" high on cats. 250 volt DC.

### LOCOMOTIVES

- 2—Jeffrey MH-2154's, 15 tons, perfect, 42" Ga.
- 4—Jeffrey, 13 ton, type MH-110, 36", 42" and 44" Ga.
- 3—Jeffrey, 10 ton, type MH-78, 42" and 48" Ga.
- 12—Jeffrey, 6 ton, type MH-88, 42", 44" and 48" Ga.
- 8—Jeffrey MH-78 Locomotive Units—cheap.
- 6—Jeffrey MH-100 Locomotive Units, reasonable.
- 2—Jeffrey, 8 ton, type MH-100, 2" ramor plate frame.
- 1—Jeffrey, 6 ton, type 2186, 22" above rail.
- 3—Jeffrey, 4 ton, type MH-96, 42", 44" and 48" Ga.
- 1—G. E., 4 ton, type 825 Locomotive, 22" high.
- 10—G. E. 6 ton, type 801, 803, 821 Locomotives, 42", 44" and 48" Ga.
- 1—G. E. 8 ton, type 822 Locomotive, 44" Ga.
- 3—G. E. 10 ton, type 809 Locomotives, 42", 44" and 48" Ga.
- 1—Goodman, 4 ton, 8-30 Locomotive, 22" above rail.
- 1—Goodman, 6 ton, Locomotive, 26" high.
- 2—Goodman type 33, 6 ton, 44" and 48" Ga.
- 3—Goodman, 8 ton, type 32A, 36", 44" and 48" Ga.
- 3—Westinghouse type 902, 4 ton, 42" and 48" Ga.
- 2—Westinghouse, type 904, 6 ton, 44 and 48" gauge.
- 2—Westinghouse type 906, 44" and 48" Ga.
- 2—Westinghouse type 907, 10 ton, 44" and 48" Ga.
- 2—Diesel Locomotives, 8 and 10 tons. Excellent.

### TIPPLE EQUIPMENT

- 1—Cedar Rapids portable super Screening Plant.
- 1—Allis Chalmers 5'x14' Ripple Vibrator.
- 1—5'x14' Robbins double deck Vibrator.
- 1—4'x10' Robbins Gyrex Vibrator.
- 1—McNally Pittsburgh all steel tipple, four track, perfect.
- 1—Complete five track Tipple, all steel, with two compartment Jeffrey washer.
- 1—Menzies tandem Hydro-Separator.
- Belt Loading Booms.
- 2—Robins Car Shakeouts.
- 10—Crushers, various sizes.
- Feeders, Drag Conveyors, and Loading Booms.

### CUTTING MACHINES

- 4—Jeffrey 29UC Universal Machines on cats.
- 2—Joy rubber tired 11RU Cutters with bug-dusters.
- 1—Goodman on cats, 31" overall height.
- 1—Baby Goodman 212, rebuilt, 250 volt DC.
- 1—Baby Goodman 212, rebuilt, 220 volt, 3 phase AC.
- 1—Goodman 312, 18" high.
- 2—Goodman 512's with Bug-dusters, like new.
- 4—Goodman 512's, rebuilt, or as removed from service.
- 2—Joy 11B Cutting Machines, rebuilt.
- 2—Jeffrey 70UR Cutters, rubber tired, universal head, low vein.
- 2—Goodman 512 Cutting Machines, 220 volt AC.
- 6—Goodman 12AA's and 112AA's.
- 2—Goodman 324 Slabbers.
- 2—Goodman 724 Slabbers.
- 15—Jeffrey 35L's, like new, 17" high.
- 2—Jeffrey 35L's, on low vein trucks.
- 15—Jeffrey 35B's and 35BB's.
- 2—Jeffrey 29B's on track.
- 2—Jeffrey 29C's, track mounted.
- 1—Jeffrey 29L on track, perfect.
- 2—Sullivan CR-10's, 15" high.

### LOADING MACHINES

- 17—Joy Loaders, all types.
- 2—Jeffrey 61CLR's on rubber, 26".
- 3—Jeffrey L-500 Loaders.
- 2—Myers Whaley No. 3 Automat Loaders.
- 2—Clarkson Loaders, 26" above rail.

### CONVEYORS

- 2—Jeffrey 52-B, 30' conveyors, 1500' each. Excellent.
- 4—Joy 30' Underground Belt Conveyors, 500' to 2000' each, excellent.
- 1—Barber Greene 30" Belt Conveyor, 1000' excellent.
- 1—Robins 30" Belt Conveyor, 1000'.
- 2—Jeffrey 52-B, 26" Conveyors, 1200' each. 3000' Conveyor Belt, 30".
- 2—61EW Elevating Conveyors.
- 2—61WH 15" Room Conveyors, 300 ft.
- 4—Joy Ladel Un-17 Shakers.
- 10—Goodman G-12½ and G-15 Shakers.
- 3—Long 400 DRH 18" Chain Conveyors, 25 H. P. Motors—new.

### WE BUY — SELL — TRADE

# J. T. FISH

LOGAN, WEST VA.

SEND US YOUR INQUIRIES

THOUSANDS OF OTHER ITEMS

Phone 2825

### CONVERTERS AND DIESEL PLANTS

- 1—50KW, G. E. TC-6, 275 volt Rotary Converter.
- 3—100KW, G. E. TCC-6's, 275 volt Rotary Converters.
- 1—150KW G. E. HCC-6, 275 volt Rotary Converter.
- 1—150KW, 6 phase, Allis Chalmers Rotary Converter, 275 volt DC, perfect.
- 1—200KW G. E. HCC-6 Rotary Converter, 275 volt DC.
- 1—200KW MG Set, General Electric, perfect.
- 2—150KW Allis-Chalmers MG Sets, 275 volt—excellent, 220-440 AC volt.
- 3—300KW, G. E. HCC-6 Rotary Converters, 275 DC.
- 1—375KW Westinghouse Rotary Converter, 275 volt.
- 1—200KW Westinghouse Rotary Converter, 275 DC.
- 1—200KW, Allis Chalmers Rotary Converter, 6 phase, 275 DC, perfect.  
(All the above with 6900/13000 and/or 2300/4000 primary transformers).
- 2—150KW MG Sets, General Electric and Westinghouse.
- 1—200KW MG Set, Westinghouse, rebuilt.
- 1—300 KW Westinghouse, 600 volt, MG Set, rebuilt.
- 1—300KW Westinghouse, 275 volt MG Set, rebuilt.
- 1—Cummins 125KW Diesel with 250 volt DC Generator.
- 1—700 H. P. Shaft Hoist, complete.
- Complete steam plant, will sell all or any part. Boilers, like new, 1100 H. P. and 500 H. P. Also transformers, turbines, etc.
- 3—Complete Tipples with Cleaning Plants, "all steel".

### MISCELLANEOUS

- Battery Supply Tractors, rubber tired.
- 10—Air Compressors, 1 H. P. to 40 H. P.
- 40—Mine Pumps, all types.
- 2—Barber Greene self propelled bucket elevators. Pipe, plastic, steel, transit, all sizes 1" to 6".
- 45—Mine Cars, drop bottom, 42" Ga.
- 30—Mine Cars, drop bottom, 44" gauge.
- 30—Mine Cars, drop bottom, 14" Ga.
- 50—Mine Cars, 48" Ga. drop bottom, 20" above rail.
- 100—Mine Cars, 18" high, end dump, 44" Ga.
- 90—Mine Cars, end dump, 20" high, 48" Ga.
- 15—Brown Payro HKL and HG Car Spotters. HKL Car Spotters.
- HG Room Hoists.
- 1—12 ton Differential Slatte Larry.
- Incline Hoists, 25 to 50 H. P.
- 1—Jeffrey 6 ft. Aerodyne Fan.
- 1—Storage Tank, 5,000 Gallon.
- 2—Storage Tanks, 4,000 Gallon.
- 1—Storage Tank, 12,000 Gallon.
- Five Gallon G. I. Cans.
- 500 Tons Relaying Rail, 25 $\frac{1}{2}$  to 80 $\frac{1}{2}$ .
- 10 tons copper trolley and feeder.
- 300—Transformers from 1 to 2,000 KVA, 110 to 13,000 primary volts.
- 400—Electric Motors, 3 to 250 H. P.
- Huge stock of Mine Supplies.

## REAL VALUES IN USED EQUIPMENT at HIGHWAY

### TRACTORS

**ALLIS-CHALMERS MODEL HD20.** Serial No. 3077, with Gar Wood cable bulldozer and DD PCU. \$14,500.00

**ALLIS-CHALMERS MODEL HD19.** Serial No. 1106, with Gar Wood cable bulldozer and DD PCU. All steel cab. \$11,500.00

**ALLIS-CHALMERS MODEL HD11.** Serial No. 659, with hydraulic angledozer, 1956 machine in excellent condition. Warranty. \$12,500.00

**ALLIS-CHALMERS MODEL HD5.** Serial No. 20422, with hydraulic angledozer blade. Excellent condition. Warranty. \$7,250.00

**CATERPILLAR MODEL D8.** three (3) tractors, two (2) with cable blades, one (1) without blade. All in operating condition. Bargains. Make an Offer

**CATERPILLAR MODEL D7.** Serial No. 3T1581. Machine in good operating condition. Excellent for back filling. \$4,500.00

**CATERPILLAR MODEL D4.** Serial No. 7U 8776, with hydraulic angledozer. In good operating condition. \$3,500.00

### HIGH LIFTS

**ALLIS-CHALMERS MODEL HD5G.** Serial No. 3485. Rebuilt transmission, checked rollers, tuned engine. \$5,850.00

**ALLIS-CHALMERS MODEL HD5G.** Serial No. 8382. Worked 2 months on new tracks. Exceptionally good machine. \$7,250.00

**ALLIS-CHALMERS MODEL HD5G.** Serial No. 10462. Clean, good machine. Ready to work. \$6,500.00

**INTERNATIONAL MODEL TD9.** Serial No. 30807. An operating machine at about 25% new price. \$3,500.00

**OLIVER MODEL OC3.** Serial No. 4500951. New engine, new clutch, reconditioned. Priced right. \$2,750.00

### GRADERS

**ALLIS-CHALMERS MODEL AD3.** Serial No. 1400. Scarifier, leaning wheels, power circle turn, fully enclosed cab. Completely rebuilt. \$7,500.00

## HIGHWAY EQUIPMENT COMPANY

6465 Hamilton Avenue

Pittsburgh 6, Pa.

Phone: EMerson 1-3600

## ADVERTISER'S INDEX

SEPTEMBER, 1957

Allegheny Machinery Sales Co., Inc.	4, 2nd cover
Allis-Chalmers	11, 12, 13
Anderson Equipment Co.	6, 7
Beckwith Machinery Co.	2-3, 19-22, 38
Cleveland Bros. Equipment Co., Inc.	19-22, 3rd cover
Conte Equipment Corp.	5
Euclid Division, General Motors Corp.	14
J. T. Fish	39
L. B. Foster Co.	38
Greensburg-Connellsville Coal & Coke Co.	38
Highway Equipment Co.	8-9, 40, 1 and 4th cover
Joanne Coal Co.	38
Licking View Tool & Machine Co.	5
Harold C. Lusk Co.	5
Northeastern Supply Co.	40
Ohio Machinery Co.	19-22
J. W. Patterson Co.	40
Salem Tool Co.	1, 5
T. L. Simpson	38
Frank Swabb Equipment Co.	10, 38
Walker Machinery Co.	19-22

## MACWHYTE

WIRE ROPE · SLINGS · WIRE ROPE ASSEMBLIES

## NORTHEASTERN

### SUPPLY Co.

321 CHERRY AVE., N. E.  
CANTON, O.

Also Branch Zanesville Supply Co.  
ZANESVILLE, O.



## MARION

Power Graders

## AUSTIN WESTERN

Power Shovels

## AUSTIN WESTERN

Crushing Equipment

## J. W. PATTERSON CO.

ROOK STATION CARNEGIE, PA.

# Guaranteed EFFICIENT OPERATION for your reconditioned CAT engine

**CLEVELAND**

**BROTHERS**

**DYNAMOMETER**

**TESTS**

**YOUR**

**ENGINE**

**FOR...**

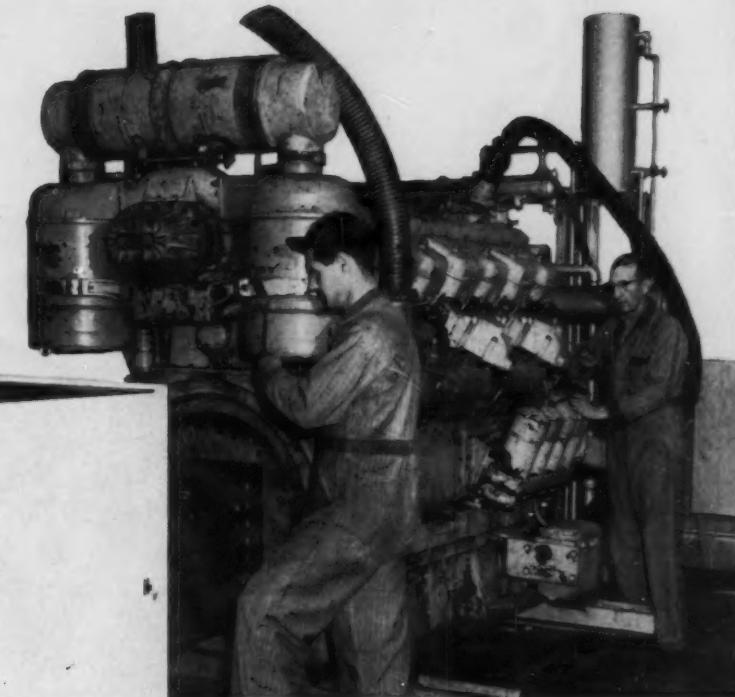
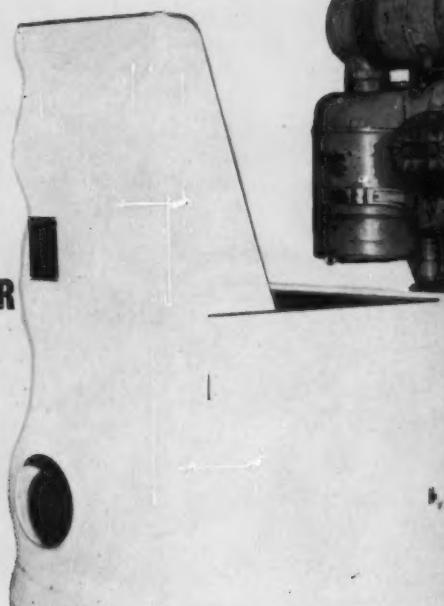
**FULL  
HORSEPOWER**

**FUEL  
CONSUMPTION**

**OIL LEAKS**

**WATER  
LEAKS**

and over 30 other tests



500 H. P. Cat D397 Diesel Engine with Roots Blower being tested on Dynamometer  
in our Wilkes-Barre Service Dept.

Reports are coming in from the field on the wonderful results obtained  
from Cleveland Brothers reconditioned Caterpillar engines.

Guess work is entirely removed when your engine is serviced at  
Cleveland Brothers. This new Clayton 700 h.p. Dynamometer (pictured  
above) will test any make diesel power unit or tractor engine includ-  
ing the new higher horse-power engines. More than 30 tests can be  
made to make sure that your engine is working at peak efficiency.

To guarantee a longer life for your engine . . . at peak efficiency . . .  
at full horsepower, call Cleveland Brothers today. Our service experts  
will be glad to give you all the details of this amazing Dynamometer  
and will set up a convenient schedule for your engines. Make that  
money-saving call now.

Cat & Caterpillar is the Registered Trademark of the Caterpillar Tractor Co.

**HARRISBURG**  
Route 322 (Hershey Road)  
Phone CEdar 6-7981

**WILKES-BARRE**  
Route 309 (Ashley By-Pass)  
Phone VAlley 2-8141

**FRACKVILLE**  
Route 122 (State Road)  
Phone 701

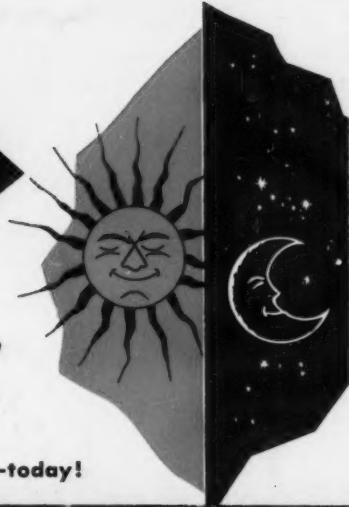
**PHILIPSBURG**  
307 Alder St.  
Phone 90



## **CLEVELAND BROTHERS** EQUIPMENT COMPANY

CATERPILLAR EARTHMOVING EQUIPMENT • BUCYRUS-ERIE EXCAVATORS

great day in the morning  
... and in the evening, too!



• Yes, it's always a great production day when you use Allis-Chalmers tractors. For with A-Cs work begins on time! It continues steadily without interruption! It earns you bigger profits.

Ask your Highway representative to tell you the real A-C profit facts—today!



Allis-Chalmers HD-21 . . . Siegel Coal Co., Clarion

*Highway*



**HIGHWAY  
EQUIPMENT  
COMPANY**

6465 Hamilton Ave. • Pittsburgh 6, Pa.

Allis-Chalmers • Lima Shovels, Cranes, Draglines • Master General Motors Diesel Engines • Power-Pack Conveyors Gar Wood • Lima Roadpackers • Burmeister Mixers and Bins Michigan Tractor Shovels and Excavator-Cranes Thor • Jaeger

AA-5886

Allis-Chalmers HD-21 . . . Pellis Coal Co., Gypsy

